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Ukraine: Monetizing a Transition Economy

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A Harvard/CASE Monograph

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Abbreviations Used in the Book

CASE	Center for Social and Economic Research
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
CMU	Cabinet of Ministers of Ukraine
CPI	Consumer price index
DEM	German mark
EBRD	European Bank for Reconstruction and Development
EERC	Economics Education and Research Consortium, Kyiv
EFF	Extended Fund Facility
EPT	Enterprise Profit Tax
EU	European Union
EUR	Euro
FAO	Fiscal Analysis Office, Kyiv
FDI	Foreign direct investment
FSB	Former Soviet bloc
FSU	Former Soviet Union
GDP	Gross domestic product
HCUP	Harvard/CASE Ukraine Project
HIID	Harvard Institute for International Development
IAS	International Accounting Standards
IMF	International Monetary Fund
IFC	International Finance Corporation, World Bank Group
IFI	International financial institutions

KBV	Karbovanets (Ukrainian currency used before the introduction of the hryvnia)
NBU	National Bank of Ukraine
NGO	Non-governmental organisations
NIS	Newly independent states (former Soviet republics)
OVDP	Ukrainian Treasury bills
RUR	Russian ruble
PIT	Personal income tax
SMEs	Small and medium-sized enterprises
SPF	State Property Fund of Ukraine
TACIS	Technical Assistance for the Commonwealth of Independent States
UAH	Ukrainian hryvnia
UEPLAC	Ukrainian-European Policy and Legal Advice Centre
UNDP	United Nations Development Program
USAID	United States Agency for International Development
USD	U.S. dollar
VAT	Value added tax
WTO	World Trade Organization

Contents

Introduction

Janusz Szyrmer

HARVARD/CASE UKRAINE PROJECT

This monograph is part of a series of books covering various aspects of the decade of Eastern European transition, with a focus on Ukraine. The book's chapters, as presented by their authors, are in fact the result of a collective effort – research, brainstorming sessions, and open seminars – on the part of Ukrainian and foreign economists associated with the Harvard/CASE Ukraine Project (HCUP). Several of the ideas in this volume have been presented before in the form of various analyses and recommendations to Ukrainian policymakers, and thus have already contributed, directly or indirectly, to Ukrainian policies and reforms.

1. Market of ideas

Due to financial constraints, Ukraine's capacity for actively supporting both basic and applied research and publications remains low. Professional books in economics and economic policy, including those on post-Soviet transition, remain in short supply. The importance of this research deserves attention and support from Ukrainian authorities and international donors.[1] Reforms

[1] In contrast to some other CEE countries, the number of books providing solid research on the Ukrainian transition is modest. These are important publications. However, international donors, willing to finance costly reforms, are not providing sufficient support for the acquisition and diffusion of the knowledge required for implementing the reforms.

undertaken in Ukraine are complex and expensive and, to be successful, require much conceptual and analytical effort.[2] Comprehensive research publications, in addition to – but not instead of – detailed policy analysis papers and *ad hoc* policy notes, are needed to formulate and implement well designed reforms. Our books are published with the aim of making our contribution towards this end.

In order to develop the competitive market of products (goods and services), a parallel development of many other "kinds" of competitive markets is necessary, such as the bonds and equities markets (stock exchange, sale of enterprises), currency and debt, real estate (land), labor (including a management skills market), technology, social and political activities (NGOs), institutions and policies, and **ideas**. A decade of experience with the post-Soviet transition demonstrated that all of these markets are indispensable for successful reforms. Moreover, they are closely interrelated and tightly interwoven, being both mutually competitive as well as mutually complementary. They are **mutually competitive**, while for striving for the attention of policymakers and scarce resources; for example, major institutional reform efforts must often be undertaken at the expense of investments into new technologies in the public sector. To provide another example, comprehensive land (agrarian) reforms are likely to produce a short-run negative effect on agricultural produce market. They are also **mutually complementary**, since they remain in strong symbiotic relationships and the development of each one of them requires the development of all of the others. Investments in new technologies require good institutional arrangements; good institutions are made possible by good policies, and good policies, in turn, are made possible by good institutions. Both good institutions and policies demand good ideas, while good ideas are generated by a strong research base, active and competent civil society (NGOs), and so on.

Neglecting any of these markets impedes the development of the entire lot. A weak and malfunctioning land market, because of opposition to the private ownership of land; or equity market, as a result of a nontransparent stock exchange; enterprise market, because of corrupt sale procedures; management skills market, arising from distortions introduced by the closed stock status of many corporations; labor market, because of laws protecting unproductive work; foreign exchange market, as a result of the absence of an operational currency exchange; or a weak and poorly

[2] Kyiv National Economic University professor Mykhailo Savluk argues that the notion that "U.S. universities are rich because the state is rich" is incorrect. Rather, "the country is rich because its universities are rich" (Gennadiy Neverov. *Ukrayina Business* (Ukrainian newspaper), December 21, 2000).

functioning ideas market, thwarted by the lack of reliable data and research capacities; etc. spill over to other markets, undermining each one of them and the entire transition process.

In other words, if one market performs worse than the others, the whole process remains sub-optimal. In fact, we would be better off by allocating more reform effort to the development of this under-performing, laggard market, and less effort to supporting those that are already more developed and performing better. For example, the effectiveness of various privatization efforts could be restricted by the absence of a properly functioning stock and management markets. Likewise, technological improvements in the energy or agricultural sectors are of little use without fundamental institutional reforms. Similarly, it makes little sense to require the introduction of market prices (cost-based) for municipal utility services when the institutional and technical infrastructures are not in place.

Great and wise efforts across the entire spectrum of these diverse markets are necessary in order to successfully replace the old, rigid, predominantly vertical structures with new, horizontal, competitive and flexible structures. Interestingly, the neoclassical concept of **allocative efficiency** applies here as well as in standard factor allocation problems. Markets are institutions and institutions turn out to be very important production factors. If there are differences in the "marginal productivities" of these markets (i.e., in the levels of their performance), then the basic requirement for allocative efficiency is not satisfied and the transition process becomes inefficient.

There is also not much point in implementing a new law or policy if there is no "critical mass" of political leaders, economic experts, and population at large who understand the underlying rationale of the law or policy and support it. For example, insisting on abolishing an export duty, if most local experts and political leaders believe that the duty is good for the country, is not the right strategy. In other words, if proper efforts are not made to collect data, do research, publish materials, provide explanations, and conduct information campaigns, formal legislative efforts will be unproductive.

Perhaps the most important lesson we learned during the last decade has been that a narrow technocratic approach to reforms and the mechanical adoption of standard western market-oriented policies will not work unless broad changes are introduced in social and institutional environments in terms of both formal and, most importantly, informal institutions. **Information and knowledge**, and their use in policymaking and investment decisions, turn out to be fundamental growth factors. In transition economies, information and knowledge become the main driving force for

reforms and growth, rather than labor, capital and technology, although the latter, rather than the former, are used as standard explanatory variables in textbook economic growth models.

An efficient market of ideas is a *sine qua non* for a successful transition. The effective execution of transition-related policies, foreign aid initiatives, etc. require knowledge and reliable information. Moreover, we must know how to allocate both the efforts and the funds, and must be able to formulate useful, realistic and meaningful tasks, i.e., reasonable targets or benchmarks. **The reform process cannot be conducted in a void**: it needs a variety of government data-collection and research units, diverse economic monitoring efforts, active academic institutions and NGOs, conferences, seminars, and publications all of which contribute to a competitive market of ideas. This in turn creates an environment in which many questions are asked, and answers to these questions are sought; and in which policy and reform initiatives are formulated, and their implementation evaluated. Thus, to do it right, a **rich intellectual infrastructure** is required.

There must also be far reaching improvements in the availability of accurate information at both the microeconomic and macroeconomic level, without which it would be impossible to invest efficiently in the economy and implement effective policies. Painful problems related to corruption, the black market, low fiscal discipline, weak contract enforcement, inadequate private property protection, low capital investment, and inefficient foreign aid cannot be solved without major improvements in the area of information and knowledge.

2. Project closure

Currently, as of May 2001, the Harvard/CASE Ukraine Project is in its closing stage. It remains operational at a low level, with an extension under the auspices of CASE, Warsaw, which has been made possible by additional funding, provided by USAID. Our main task now is to finalize various project activities and to publish a few monographs, including this volume, presenting the Project's results.

For some of us, this Project has meant a lot, and perhaps, in a way, has given our lives more meaning. We did our best to help a country of some 50 million inhabitants establish and strengthen its links with developed western countries; to improve its knowledge of economics and policymaking; and to make the lives of its people a little bit better, or at least, a little less difficult.

3. Main project accomplishments

To become a strong, independent, democratic, lawful, and prosperous European state, Ukraine must develop close economic and cultural ties with the international community of democratic states. This task requires knowledge and human capital with the skills needed by a modern market economy, and a strong civil society with a broad base of support for reforms. All of this can be accomplished with, among other things, a body of well-developed basic and applied research; mass education in economics, public policy and other modern social sciences; well-educated elite; strong democratic and market institutions; and last but not least good policies.

The output of our project is very large. While it is not possible to list everything, I will present those accomplishments I consider being the most important.

Information. As presented above, throughout the Project great importance was attached to good data, information, knowledge, and overall transparency. A number of economic data libraries and monitoring systems were therefore initiated, and several direct data surveys were designed and implemented. An important accomplishment was our assistance in initiating, designing and developing an "operational monitoring" system that is currently maintained and widely used by the Ministry of Economy. This monitoring system includes data collection, presentation, analysis, and policy evaluation. In addition, over the past year HCUP has begun designing another data system that goes beyond current standards. We call it **analytical monitoring** because it includes specially designed indicators – including "institutional" and "structural" – that, we claim, better reflect the processes occurring in an incomplete market, or transitional economy, as in the case of Ukraine. Most of these indicators reflect selected relationships, i.e., coefficients estimated by standard statistical techniques, like correlation and regression coefficients, structural ratios, etc. Unfortunately, efforts throughout former Soviet bloc countries to develop and use meaningful indicators for such economies are not very advanced. Furthermore, the existing standard indicators in policy analysis and evaluation, which are used by domestic policymakers and international organizations, fail to provide truly useful information about these economies. We have therefore tried to develop a new methodology that could be applied not only to the Ukrainian economy, but also to those of other transition countries.

National accounts and economic modeling. It is very difficult to understand what is happening in the economy and to evaluate policies without a solid, internally consistent accounting system

and strong econometric modeling capacities. An important output of HCUP is an operational macroeconomic model, well tested and thoroughly documented, which enables checking the credibility of various official statistics, reconciling national accounts, estimating crucial structural and behavioral coefficients, explaining transformations of the economy, running diverse hypothetical simulations, and producing economic forecasts. Due to significant problems with data, this model is still more a learning tool than a reliable forecasting utility. It assists in detecting problems with official data and with idiosyncratic arbitrary policies. More work is needed to account for the unofficial (shadow) economy and its effects on structural changes and growth.

Struggling with virtuality. Virtuality is a typical feature of a post-Soviet economy. It consists of a large quantity of facts and figures that exist officially, but not in reality. As virtuality is the main enemy of market reforms, HCUP directed its attention to "non-standard" data that is not available from official libraries, and to non-standard methodologies for gathering, analyzing, and using this information in formulating policy recommendations. Our focus was on bureaucracy, the shadow economy, corruption, budget-sector expenditures not included in the official budget, barter, "mutual settlements," arrears, nonpayments, etc. A number of surveys were conducted – on the shadow economy, impediments to trade, international competitiveness of the Ukrainian economy, and others – and we presented many research reports that were used by Ukrainian policymakers and analysts.

Education. We viewed support for education as the most important task of the Project. Thus, we held several series of seminars on economics, finance, and macroeconomic policies in which many members of the *Verkhovna Rada* (the Parliament) and senior staff members of the Ministry of Economy and National Bank participated. We also offered a large number of open seminars covering a variety of economic policy issues, which were attended by hundreds of policymakers, analysts and advisors. Other activities included seminars and internships for economics students. A number of our interns and junior economists were trained with hands-on experience by participating in a variety of policy analysis projects, and we managed to sponsor several of them to attend educational programs at Harvard. In fact, about twenty of our former consultants and interns are currently studying at Harvard and other top U.S. and Western European universities.

Dissemination. We sent our current economic reports and policy analysis studies to the several hundred people in the Ukrainian economic policy "community," including the Government and its agencies, research and educational organizations, foreign assistance

organizations, and others. The Ukrainian mass media – including TV, radio, newspapers, and professional journals – frequently interviewed members of our team, presented our educational programs, and featured our articles and policy research papers on a number of occasions. Our Internet site was visited daily by many people from every region of Ukraine and from abroad.

Broad intellectual support. HCUP has maintained close contact with many senior policymakers in Ukraine, as well as with Ukrainian and foreign policy analysts and advisors. We have had numerous informal meetings and discussions on a variety of issues – both general transition-related problems and concrete reform initiatives – as well as large round-table conferences, workshops and seminars. The informal meetings in particular enabled us to develop cordial relationships with people involved in Ukrainian reforms, to build confidence in one another, and to exchange views on a wide range of topics. It was truly a great learning experience for both sides.

NGOs. HCUP cooperated with a number of Ukrainian NGOs, and especially with educational and **think-tank organizations**. Our cooperation resulted in many joint projects, seminars, presentations and publications. On several occasions, we helped establish links between Ukrainian NGOs and the Ukrainian government, donors, and foreign NGOs. This joint work contributed significantly to many reform concepts and initiatives.

Lessons from the international experience. Ukraine is not alone in its reform efforts. Similar transformations and problems, although varying in degree, are occurring in neighboring countries. An important task of the Project was to bring the reform experience of other countries to Ukraine for the latter to learn from these accomplishments and failures. We have also established close ties with several countries in the region, especially with **Poland and Bulgaria**. Polish and Bulgarian experts participated in all of our endeavors, including education, conferences, direct policy support, and research (international comparative studies). In this regard, we focused on issues like fiscal policy, taxes, rural development, agriculture, corporate governance, capital market development, and administrative reform (decentralization).

Opening up. HCUP helped develop Ukraine's international contacts by: putting its leaders in touch with experts and policymakers in other countries, especially in the U.S.; assisting and/or supporting foreign trips of Ukrainian policymakers, researchers, and students; and sponsoring visits to Ukraine by internationally-known intellectuals, economists, and policymakers. We also brought to Ukraine many outstanding experts in economic policy, including a number of professors from Harvard, University of

Pennsylvania, Oxford, and other universities. Finally, we assisted Ukrainian experts in establishing contacts with their counterparts in the CEE and several western countries.

Policy advice. HCUP helped Ukrainian policymakers with many day-to-day issues – like fiscal and monetary policy, and privatization – and produced hundreds of policy memoranda. Direct assistance was also provided for the preparation of many official international and government presentations and documents, and many of the latter were based on our materials. An important aspect of this activity was the effort to help establish certain standards for cooperation between policy analysts, advisors, and political leaders. The problem is not only the nature of the advice, but also the capacity to apply it. In this regard, Ukraine needs to develop the **professional advising culture** that was absent in the Soviet Union. Under the Soviet system, important economic decisions were of a political nature and were monopolized by a small group of leaders in Moscow. As economic policy in the western meaning of the word was not practiced, policy advising was therefore not necessary.

Struggling with "gaps." HCUP's efforts were aimed at identifying important and harmful gaps in existing knowledge, and at filling these gaps with meaningful research. A good example of such a gap was the "territory" between macroeconomic and microeconomic policies and reform initiatives. While a number of experts worked on various macro and micro issues, almost none studied the mutual links, impact and feedback. We therefore initiated an important project, *Micro Foundations of Macro Policies*, which encompassed both data collection and research. This project was especially appreciated by many senior advisors to Ukrainian policymakers.

Reforms. We assisted in all major reform efforts in Ukraine, especially in developing the **Pynzenyk** comprehensive reform package in the fall of 1996, and the **Yushchenko** program *Reforms for Prosperity* in the spring of 2000. In both cases our team worked closely with Ukrainian leaders to produce these milestone reform documents. Over time, we have seen our reform recommendations gradually implemented.

Almost always there occurred a significant time lag between a reform initiative and its implementation. There are several examples: the abolishment of so-called mutual settlements in the budget sphere, abolishment of pension arrears, cuts in payroll tax, an increase in the proportion of fiscal income generated by excise taxes, low and flat tax rates for small business, a floating exchange rate, various privatization initiatives, liberalization of the internal registration of citizens (the *propiska*), liberalization of international trade and travel, etc.

Credit for these reforms should go, first of all, to Ukrainian policymakers, and also to local and foreign advisors, including the Harvard/CASE team. Moreover, it appears the first positive results of these reforms are finally beginning to be noticed. Over the past year, GDP, household incomes, consumption, output from consumer-oriented industries and from agriculture, foreign trade turnover, and banking sector activities increased significantly (some of them increased for the first time since independence), while barter, "mutual settlements," arrears, and foreign debt declined.

Consistency (reforms and policy integration). A serious problem for Ukraine is the fact that policies are highly segmented, often with a lack of internal consistency between them. HCUP attempted to assemble parts of various policies into one consistent framework, both institutionally (the structure of the policy process) and in substance. There are several policymaking units in Ukraine, but communication between them is underdeveloped and coordination mechanisms are lacking. Likewise, there are a number of good policy documents – some of them officially approved by the Cabinet of Ministers and the Parliament – like the *Reforms for Prosperity* program and the *Partnership and Co-operation Agreement* with the European Union. However, the actual policies still tend to be narrowly defined, focusing on specific issues, and are not fully reconciled with these basic documents, nor with one another. HCUP has therefore been arguing for the establishment of a **policy coordination unit**. While the unit has not yet been established, some coordination efforts have been partially successful. We also argued for and assisted in designing a comprehensive system for monitoring policies and legislation. Our initiative to formulate an **economic constitution** for Ukraine was well received by several policymakers but still awaits implementation.

4. Acknowledgments

According to many experts, the Harvard/Case Ukraine Project was one of the most important USAID projects in Ukraine. Closing it down has not been easy. We, as well as USAID and the U.S. Ambassador to Ukraine, received many phone calls and letters explaining the unique importance of the Project and arguing for its continuation. We have met with a lot of appreciation from a very large number of persons, both in Kyiv and Washington, for which we are grateful.

Soon, a new USAID project will begin and hopefully, after the usual difficult start-up time, some of our activities will resume. The new project will be run not by Harvard but by a professional consulting firm.

It is difficult to overrate the importance of good systematic long-term economic monitoring, solid economic research, academic education and policymaking capacity-building, good reform measures and sound policies. Many foreign aid projects continue to be wasted until good economic policies are implemented, as was convincingly documented in a 1998 World Bank report *Assessing Aid: What Works, What Doesn't, and Why* and several other publications.

Ukraine needs considerable assistance in order to develop its own policymaking capacities. While the country's internal capacities have increased rapidly, Ukraine still needs considerable international help in its reform efforts. If adequate assistance is not provided, then one should not expect Ukraine to implement reforms quickly and appropriately. Moreover, if the necessary policy assistance is not made available, then one will have no moral right to criticize Ukraine for the "sluggishness" of its reforms. We hope that western leaders will understand the crucial importance of aid to policymaking, namely, capacity building, assistance in economic policies, and in reforms. We remain optimistic in hoping that, one way or another, useful economic policy assistance for Ukraine will be resumed.

I must stress the great commitment of the entire Harvard/CASE team in Kyiv. Many important activities were incorporated within this one single project. Khwaja Sultan, David Snelbecker and all our Ukrainian and Polish (CASE) experts contributed greatly to it. Furthermore, the Project would not have begun without the active support of Jeffrey Sachs and Alexander Pivovarsky who were instrumental in the early reform initiatives that served as blueprints for all consecutive reform efforts in Ukraine over the past four years. Indeed, the list of individuals who greatly contributed to our project is very long.

Our list of appreciation includes many international experts, especially professors Gerard Adams, Anders Aslund, Leszek Balcerowicz, Andrzej Bartnicki, Marek Dabrowski, Gerard Duchene, Yegor Gaidar, Rumen Gechev, Lester Gordon, Paul Gregory, Mirek Gronicki, Glenn Jenkins, Carol Leonard, Herbert Levine, Gregory Mankiw, Jerzy Osiatynski, Krzysztof Ostrowski, Thomas Reiner, Yochanan Shachmurove, Joseph Stern, Ann Strong, and the late Wladek Jermakowicz. We also enjoyed great support from several other individuals at Harvard and other U.S. and European universities.

I must also emphasize our friendly and productive collaboration with, and significant contributions from, a large number of individuals in the Ukrainian Government and its agencies, especially the National Bank and State Property Fund, and many Ukrainian NGOs.

A crucial factor in HCUP activities was a close co-operation with many academic and research centers in Kyiv, in particular: Association of Ukrainian Banks, Center for Economic Development, Center for Market Reforms, Economics Education and Research Consortium (EERC), German Advisory Group, Institute of Reforms, KPMG-Barents, Ukrainian-European Policy and Legal Advice Center (UEPLAC), Ukrainian Center for Independent Political Research, and others.

Our appreciation goes, as well, to our colleagues in international organizations: EBRD, IFC, IMF, TACIS, UNDP, the World Bank, and officials in several embassies in Kyiv, in particular the Austrian, British, Canadian, Polish, and U.S. embassies.

Of course, **the whole project would not be possible without the sponsorship and helpful support of USAID**.

We express our sincere thanks to all those who supported and contributed in many ways to our project.

BOOK OVERVIEW

A principal difference between the centrally controlled Soviet economy and a competitive market economy is the role that money and financial activities play in the two systems. In the latter, money is the fundamental category and its circulation connects all parts of the economy. Money provides a "common denominator" for all transactions and enables the economy to establish horizontal links among producers and consumers, thus making that economy "competitive."

In the first chapter of this book, ***Finance and Growth***, the relationship between financial development and economic growth is reconsidered in the context of post-Soviet transition. The authors assert that successful transition is not possible without a strong revival of the financial sector, which, in a Marxian economy, was downgraded to a peripheral status and basically treated as a predominantly passive accounting system. Unlike the "real" sector, the financial sector was alleged to fail to produce any useful goods. As explained in the first chapter, this is an extremely important sector and one of the main tasks during transition is to elevate this sector from its laggard position to one where it actually leads the economy. Moreover, the issue is not only the establishment of an appropriate financial system infrastructure, but – even more importantly – the need for a change in perceptions, in the ways of doing business, and even in terminology. In this book, we avoid for "ideological" reasons the confusing distinctions between "real" and

"non-real," "productive" and "non-productive," etc. Banking, insurance, and real estate are treated as "normal" – real and productive – industries, i.e., they are similar to other branches of the economy. However, given that financial sector activities affect the operations of all industries and, for that matter, the entire economy, financial development possesses many features of public good. This justifies and necessitates special attention and active support from government. In this chapter, the authors examine the performance of this sector in Ukraine and conclude that its weak condition explains the current poor state of the Ukrainian economy and vice versa, and that its development would stimulate economic growth.

This latter assertion leads to two important conclusions. First, as pointed out in the second chapter, ***Institutional Development of the Banking System***, the financial sector provides insightful benchmark indicators that can be used to monitor, analyze, and evaluate the overall progress of transition and economic development. This progress is not adequately reflected by standard macroeconomic aggregates, such as GDP, inflation, consumption, investment, and income. Transition requires institutional investment in the economy; in the short term, however, this type of investment often fails to deliver tangible economic outcomes. In fact, more often than not, the immediate result of this investment is a worsening of these aggregates rather than their improvement. Thus, judgments formulated and policies evaluated on the basis of these aggregates tend to be misleading. High inflation, high unemployment, shrinking GDP, etc. are not necessarily "bad" if they reflect the implementation of fundamental market reforms. These reforms are expensive in many ways – economically, socially, and politically. Moreover, they do not usually help political leaders win elections, and fail to produce tangible outcomes confirming the accomplishments of foreign aid providers. Almost everyone – including political leaders, policy experts, and most importantly, the voters – view diminishing industrial output, declining foreign trade, and growing income inequality as policy failures. In fact, these aggregates could indicate a true failure indeed, unless they are related to appropriate institutional transformations, the development of market mechanisms, and enterprise restructuring reforms, all of which are not taken into account by standard macroeconomic statistics. If this is the case, the formulation and systematic monitoring of well-selected financial development indicators could provide the clue for evaluating policies and assisting in determining the degree to which economic decline and destabilization may be due to policy mismanagement or to long-term, useful – although painful and unavoidable – reforms.

The second conclusion is the need to appreciate the importance of financial development. "The current targeting of monetary policy tends to be too narrow and results in governments using diverse non-market, or even anti-market measures. …[Central] banks in transition societies should make the development of the financial system a high priority, or a 'parallel target'" (***Financial Sector Development as a Central Bank Target in Transition Economies***). It seems that, in the past, financial development was not given the attention and care it deserved. In particular, the accomplishments in macroeconomic stabilization were often made possible at the expense of this sector. Policymakers tended to treat financial institutions instrumentally – as a means for making policy, and not the aim itself – by using them as tools in their efforts to control prices, collect taxes, bridge fiscal gaps, subsidize favored sectors and enterprises, protect the "national producer," manage foreign currency exchange, etc. This strategy often rewarded political leaders with short-term gains, like low inflation and a stable exchange rate, but punished the economy with delays in the establishment of a strong competitive banking industry and the entire financial sector. Weak and mismanaged banks fell prey to powerful interests that took advantage of this weakness. Tight controls – undertaken to accumulate money in the banking system and to prevent shadow transactions, corruption and capital flight – tended to paralyze commercial finance and produce outcomes opposite to those officially proclaimed. The financial sector can hardly prosper and grow when abused by corrupted interests and micro-managed by authorities whose priorities are often not aimed at strengthening and further developing financial institutions.

Examples of specific financial development tasks for a central bank in a transition economy are provided in the chapter ***Role of the Central Bank in the Development of Banking***. A basic problem is the pervasiveness of asymmetric information, which in a transition economy becomes a major obstacle to reforms and growth. The experience of countries like Russia, the Czech Republic, Bulgaria, and Albania has demonstrated the harmful consequences that can be produced by mishandling this asymmetry in the banking industry. Imposing strict informational requirements that foster greater transparency in banking, more consistent rules and less confusing administrative micro-management, fewer market distortions (such as supporting an overvalued currency or providing loans ordered by the authorities), and strict contract enforcement become tasks of crucial importance for monetary policy leaders.

All of these tasks are aimed at helping to monetize the economy, thus enabling money to fulfil its basic functions. In the chapter ***Cyclical Dynamics of the Demonetized Sector***, all transactions

conducted without money, or "non-monetary transactions" – like barter, payments with promissory notes, arrears, etc. – are aggregated into a "demonetized sector" that becomes a complex transaction system with its own peculiarities and patterns of behavior. Studying these patterns helps one to understand the underlying processes and to detect important causalities. An interesting feature of the demonetized sector is its cyclical behavior. Description and analysis of the cycles improves our understanding of the demonetization phenomenon, assists in explanation and forecasting, and provides benchmarks for policy evaluation and economic performance. The study of "demonetization cycles" confirms the existence of various fundamental problems in the Ukrainian economy, like the vicious circle of debt, and illustrates the specific economic effects of new institutional arrangements. It turns out that enterprise arrears tend to "shuttle" between payments for labor and payments for other inputs. Overdue inter-enterprise liabilities are reduced at the expense of wage arrears, while the latter are diminished at the expense of the former. Arrears cycles are similar to those observed in centrally planned economies. During transition, the system of fiscal and other financial regulations and penalties plays a similar role to that of centrally planned output quotas that require certain levels of performance by given dates. The one-year and five-year planning cycles, which had occurred in the Soviet economy, are now replaced by annual demonetization cycles and, perhaps, by longer transition cycles related to the subsequent stages of structural reforms. The one-year cycles result in the seasonal increases and declines of various kinds of nonpayments, arrears and barter transactions. The long-run cycle manifested itself in the economic decline and increased demonetization of the 1990s, with a "peak" in 1997-99, and a "plateau," or switch in the direction of change, in 1999-2000.

Barter is an important pillar of the demonetized economy. "The role of barter in a post-Soviet economy may be much greater than many economists would be willing to admit. … [The] main problem with barter is not its alleged high transaction costs, but rather its nontransparent nature. … [Barter] transactions break the market down into a huge number of separate little segments, each of them creating a small niche that provides appropriate 'intimacy' for a sale/purchase contract. … An obvious negative externality of barter is its promotion of an idiosyncratic clandestine business culture, where all pieces of the officially available information – prices, wages, interest rates, sale transactions, privatization contracts, tax payments, etc. – are 'virtual', not real, at best only partly true. … Of course, this kind of duality – official and unofficial (further complicated by the multiplicity of many shades of 'gray-area' operations) – does not help successful reforms and dynamic

sustainable growth." – according to the chapter on ***Transactions in Transition: To Barter or not to Barter?*** In the literature, there exist a large number of hypotheses concerning the causes of barter. All of these hypotheses seem to be at least partly true; some of them become less important in time, while others become more important. Learning by doing, businesses continue to refine their barter strategies in order to take advantage of the low level of transparency. Barter becomes an important way for firms to stay in business and to generate monopolistic rents.

According to a hypothesis presented by the author of ***The Fundamental Macroeconomic Cause of Barter and Arrears in Post-Soviet Economies***, the main reason for barter is a combination of harsh price policy and soft budget constraint. If market clearing-prices are lower than actual production and transaction costs incurred by producers, and selling products below cost is not allowed, then producers have to find a way to increase product prices and reduce input prices. The former can be accomplished with barter deals between suppliers and purchasers in which official transaction prices are made much higher than market cash prices. The latter can be accomplished with arrears, payments with various promissory notes, partial payments, virtual payments (through some mutual settlements), and simple nonpayments. If this is so, then the main cause of barter, more than anything else, is confused price policy, and, unless this policy changes, barter will continue to prosper.

The last two chapters, ***Industrial Production and Finance*** and ***The Economic Situation in Ukraine: 2000*** provide an overview of Ukraine's economic performance in 2000. The bad news is that the economy remains in poor condition. The good news is that it improved significantly in 2000. GDP remained at a shamefully low level – UAH 2600 (USD 630) per capita in 1999, and UAH 3600 (USD 660) per capita in 2000. Raw materials and other low value-added products (power, fuels, metals, and chemicals) accounted for two-thirds of gross industrial output and two-thirds of foreign trade. Inflation increased in 2000, reaching about 25 percent. Net fixed capital formation (gross investment less capital depreciation) was negative. Very little investment was done by privately owned enterprises: 92 percent was undertaken by state-owned and "collective" enterprises, while bank credits and equity investments played a marginal role, amounting to just a few percentage points. Total foreign investment in 2000 was USD 12 per capita, which was one of the lowest levels in the world. If to subtract from this figure institutional investment (EBRD and others) and domestic reinvestment (Ukrainian capital repatriated through a foreign firm), then true foreign commercial investment was negligible. The

financial sector remained in a rudimentary stage, and bank deposits and credits were very low. In the last quarter of 2000, banking industry profitability sharply declined to negative values. Average official daily income and household expenditures remained below the World Bank poverty benchmark of USD 1 per person per day. Only shadow transactions raised this figure above USD 1. Privatization provided less income than expected, for which nontransparent procedures and the low-level attractiveness of Ukrainian enterprises were blamed. Despite all of these gloomy figures, the year 2000 delivered several good figures. Almost everything "bad" – wage and pension arrears, barter, fiscal deficit, foreign debt, etc. – was reduced; and almost everything "good" – GDP, real wages and incomes, foreign trade, industrial output, agricultural output, foreign currency reserves, bank deposits and credits, etc. – increased, although we lack sufficiently precise and detailed information for evaluating the time scale and sustainability of these improvements. Asymmetric information, at both the aggregate (macro) and enterprise (micro) levels, remains a main factor that confuses everybody, including political leaders, experts, foreign aid providers, the mass media, investors, producers and consumers. Improving the transparency of the entire economy, including tax collection, foreign trade, stock exchanges, banking, real estate operations, and so on, has become a major task for Ukraine for the next few years.

At the end of the book, ***Harvard/CASE quarterly economic monitoring tables*** are provided. They present selected indicators for the Ukrainian economy, annually, 1995-2000, and quarterly, 1999-2000, covering output, foreign trade, balance of payments, public finance, prices, debt, exchange rates, monetary indicators, foreign currency reserves, privatization, and wages. Many figures used in the book are derived from these monitoring tables and other data collected in the Harvard/CASE database.

This book is a result of the collective effort of the Harvard/CASE Ukraine Project team. In particular, I wish to acknowledge the significant conceptual contributions of Vladimir Dubrovskiy, Charles Mohan, Alexander Paskhaver, Alexander Pivovarsky, and Thomas Reiner. The consecutive translations (between the Ukrainian, Russian, and English languages) and several editions were a joint venture of the editor of this book and the authors of its chapters, assisted by many individuals: Yarema Bachynsky, Lilia Golodniuk, Zina Kravets, Kristina Krechevska, Anna Kolesnichenko, Anna Myslinska, Yuriy Oliynik, Mellisa Racey, Andrey Pivovarsky, Andrea Pyenson, Thomas Reiner, Olya Ruda, Peter Smilsky, and Lukasz Szyrmer. Our special thanks to Liudmila Furta and Pavel Furta for their technical editing of the book. Kristina Krechevska skillfully and spiritedly coordinated the entire process.

CLOSING REMARKS

A main argument of this book is the great need to improve the **transparency** of the entire economy. Only with transparency can one expect to see good policies and wise investments, and hence, economic growth and prosperity. Moreover, not only must the economy be made more transparent, but also markets must become more open and more competitive, contracts better enforced and private property more effectively protected. Yet, all of these changes will not be possible without a further **monetization** of the economy. Money and a well-developed financial sector are irreplaceable. In this regard, Mancur Olson (*Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic Books, 2000) expressed an interesting concept: economic and social development is made possible by **advanced transactions**, meaning transactions involving complex financial operations. Countries that practice only simple direct transactions fail to build an institutional environment in which the efficient allocation of resources over space and time is possible, and which gradually enables both political "power" and social/economic "prosperity." **No country thus far has enjoyed technological sophistication, high living standards, and a strong economy without these advanced financial transactions**.

If this is true, then the most successful transition economies will not be those that are the most stable with the most sophisticated technologies and the highest industrial output, but rather those that monetized their economic transactions, established a strong competitive financial sector, and overcame informational confusion by eradicating the infamous virtuality. Such measures will enable the development of Olson's advanced transactions, thereby fostering efficiency and prosperity.

FINANCE AND GROWTH [1]

Khwaja Sultan,
Dimitar Mishev,
and Olga Pogarska

Introduction

Under the Soviet system, all financial resources were allocated by the state according to the priorities of the *Gosplan*. These allocation decisions were made for ideological and political reasons rather than for reasons of economic efficiency. Economic actors did not compete for financial resources according to who was prospectively the most efficient, so there was no need for a developed financial system. Yet, according to Joseph Schumpeter, a well-functioning active financial system spurs technological innovation, mainly by identifying and supporting entrepreneurs with the best chances for success. A growing body of findings from empirical analyses – including firm-level studies, individual country studies, and broad cross-country comparisons – demonstrates a strong positive relationship between functioning of the financial system and long-term growth. In fact, as empirical evidence suggests, development of the financial system is a precursor and necessary condition for sustained growth and successful economic transformation in post-Soviet transition economies. Ross Levine argues that the current

[1] Research under the supervision of professor Janusz Szyrmer. This chapter was originally published in 1999 as an Harvard/CASE Working Paper; and was updated and revised in spring 2000. Unless otherwise specified, the sources of information and data used in this chapter were: Financial Week (1999), Business, Quarterly Monitoring, and Harvard/CASE database. For another analysis of Ukrainian banking covering the year 2000, see "Institutional Development of the Banking System" in this volume.

level of financial development (in year *t*) is a good predictor of future rates of economic growth, capital accumulation, and technological change (in year *t*+*n, n*=1,2,…):[2]

$$Economic\ growth_{t+n} = f\ (Financial\ system_{t})$$

This statement has serious implications for Ukraine. If its financial sector is not strengthened soon, Ukraine could remain in the group of low-income countries for a long time.

This chapter presents the results of a study undertaken with the goal of improving our understanding of the role of the financial system in promoting growth and recovery in transition countries. Its focus is on Ukraine.

In Section 1, we present a cross-country analysis of banking activities to examine the relationship between the size of the financial system and growth. We also discuss the important functions that banking performs in a market economy, and argue that if these functions are not fulfilled, the transition to market economy will become a difficult and prolonged process. In Section 2, we highlight some characteristics of Ukraine's banking, especially those related to asset structure and credit portfolio, with the goal of identifying the main problems in this industry. In Section 3, we explore some specific constraints which, we argue, drive away consumers of banking services, as a result of which, there is little financial intermediation in Ukraine. Finally, in Section 4, we suggest an agenda for policymakers which would allow banking to develop, thus, promoting economic growth.

1. Banking and the economy

Cross-country analysis

The banking industry is critical for capital accumulation, technological change, and growth. Some transition countries, through consistent institutional changes, have created conditions for banking to grow rapidly. Ukrainian banking has remained small and underdeveloped. To assess the level of banking system development, implementation of its basic functions (see below) and quality, the ratio of domestic credits provided by banking system was used for a number of countries (Figure 1). As can be seen this indicator remains very low for Ukraine even compared with the average for Central European countries, leave alone the average for developed ones.

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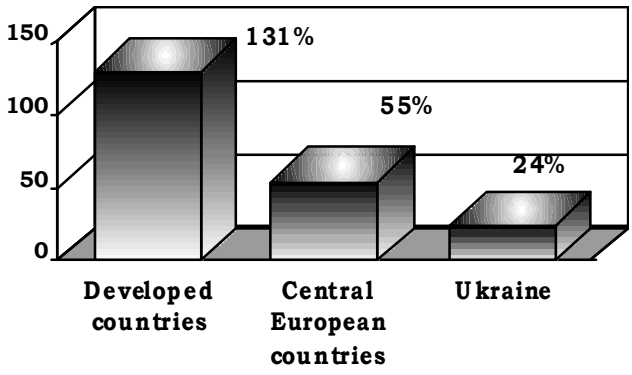
[2] Levine, Ross. 1997. "Financial Development and Economic Growth: Views and Agenda." *Journal of Economic Literature 35.*

Levine, while comparing bank credits to private enterprises as a percentage of GDP noted that, on average, "very rich" countries have this indicator equivalent to 53 percent of their GDP; "rich" countries, 31 percent; "poor" countries, 20 percent; and "very poor" countries, 13 percent. In terms of its GDP, Ukraine is classified as a poor country, yet its credits to private sector, as of the end of 1999, are 8.6 percent of GDP (Bulletin, 2000/4); i.e., they are lower than the average for very poor countries.

Evidence from selected transition countries (Figures 2 and 3) shows that growth in banking activity (measured in terms of aggregate deposits and aggregate lending to the private sector) goes hand in hand with economic growth. Countries with a sizeable expansion in banking show a significant increase in GDP. As a result, increased banking activity becomes a good proxy for future economic growth. In Poland, deposits per capita have risen from USD 742 in 1994 to USD 1,318 in 1998. During this period, Poland's growth rate has averaged 6 percent. Other countries – like the Czech Republic, Croatia and Estonia – have experienced a similar growth in deposits coupled with growth in real GDP. In Ukraine, deposits per capita have remained stable at about USD 50 over the same period. This coincides with the decline in GDP throughout the 1990s.

Figure 1

Ratio of domestic credits provided by banking system, developed countries* and Central European countries, average, and Ukraine, end of 1999**



* France, Germany, Italy, Japan, United Kingdom, and the USA.

** The Czech Republic, Hungary, Poland, and Slovakia.

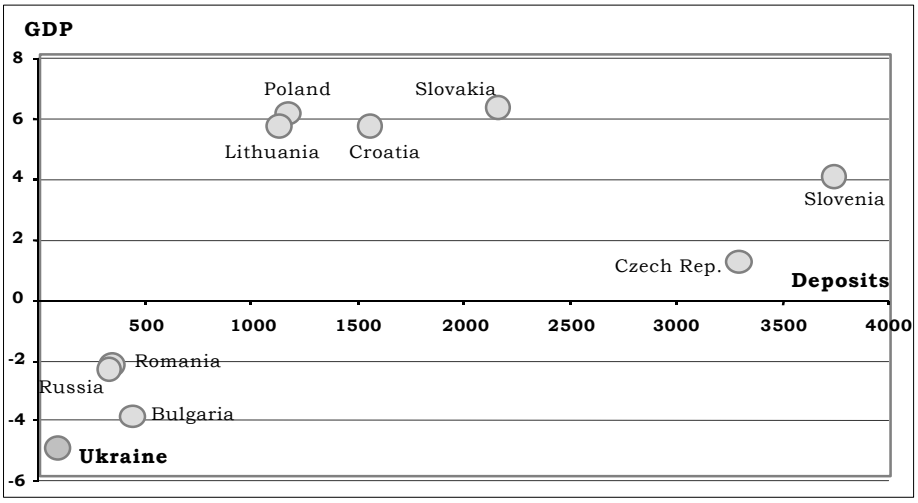
Source: Report (2000/2001)

An analysis of banking in twenty countries in CEE and Latin America, in 1995-97, demonstrates that GDP growth and bank lending to the private sector are positively interrelated (Figure 3). The volume of private lending reflects several factors:

- Policy: with increased private lending, fewer "directed loans" are requested/ordered by the government (these usually are provided to state-owned enterprises).
- Economy: private sector lending is related to the level of emancipation of the economy from state interference.
- Banking: large private lending is likely to reflect a competitive banking industry.

Figure 2

Annual GDP growth, percent; and bank deposits, USD per capita, end of year; averages for both variables (GDP and deposits) over period, 1996–1998



Source: International Financial (1998)

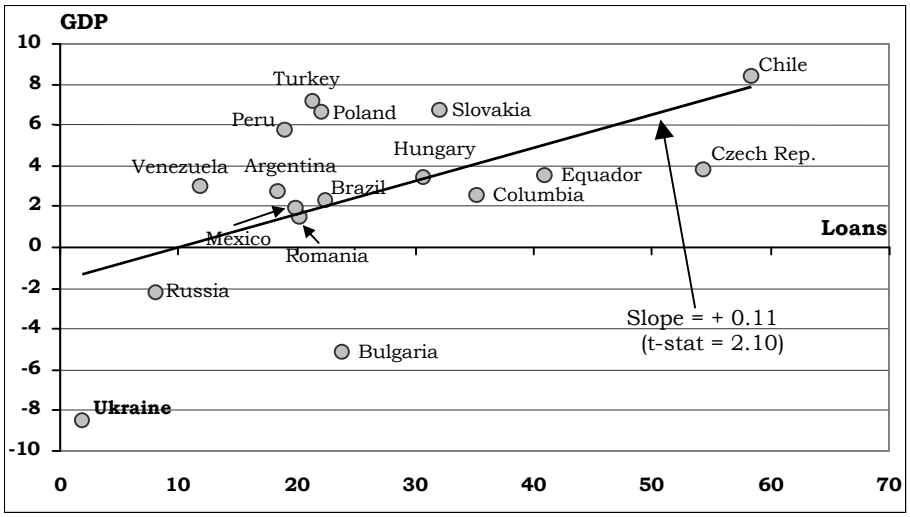
In Ukraine, credits to private borrowers, expressed as percent of GDP, are among the smallest for emerging markets (Figure 3, and Appendix Figures A1, A2, and A3).

While credits to the private sector are positively related to GDP growth, credits to the public sector adversely affect growth (Figure 4). There are several possible reasons for this. First, governments often borrow to finance current consumption rather than investment. Thus, no new income-generating capacity is created. Second, even when governments do invest in social infrastructure, the effect on income growth is slow. Third, the three groups of factors related to lending to private borrowers apply, but in reverse.

Large public sector credits tend to reflect a low emancipation from state interference in banking and the whole economy, and less market competition.

Figure 3

Annual GDP growth, percent; and bank loans to private borrowers, percent of GDP, end of year; averages for both variables (GDP and loans) over period, 1995-1997



Source: Emerging Markets (1998)

Importance of banking

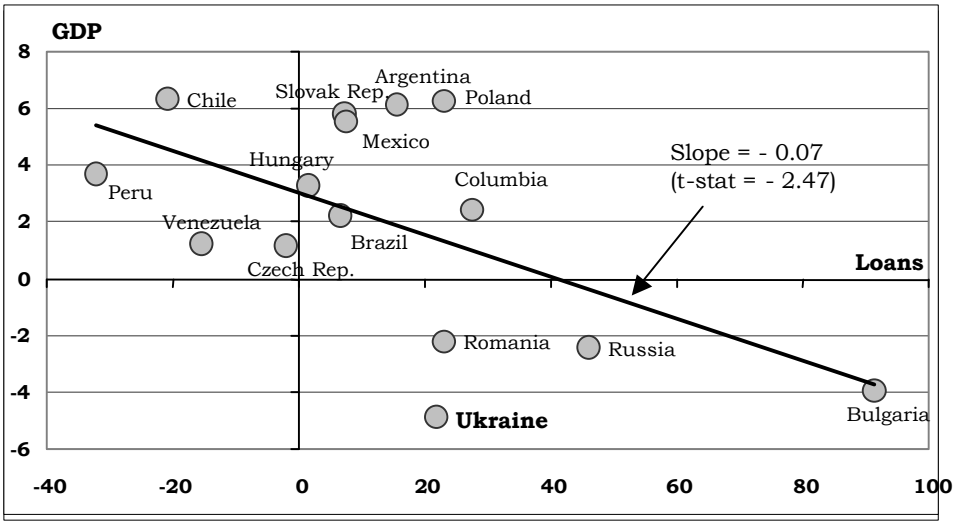
Banks provide an important link between savers and entrepreneurs in an uncertain environment by performing the following functions: (1) they allocate resources from savers to the most promising entrepreneurs, (2) monitor the managers of borrowing enterprises, (3) trade risks, (4) mobilize savings, and (5) facilitate the exchange of goods and services.[3] These functions are especially important for transition economies, which need to bolster private financial resources for investment in new businesses.

It would be costly for individual savers to attempt evaluating various firms and the activities of their managers. Most households do not have time, capacity nor expertise to judge market conditions accurately. Savers would be reluctant to invest their money without reliable information about borrowers or the market. Banks provide this expertise on behalf of all savers who deposit their money in banks, and thus economize on the acquisition of information. By carefully selecting enterprises, banks allocate financial resources to earn the highest profit for the given level of risk.

[3] Levine, op. cit.

Figure 4

Annual GDP growth, percent; and change in bank loans to public sector, percent, end of year; averages for both variables (GDP and loans) over period, 1995-1997



Source: Emerging Markets (1998)

It would be inefficient for individual savers to monitor borrower enterprises. For one, this would impede investment and business decisions. Individual monitoring by individual lenders would also be very expensive. Finally, individual savers would not have the capacity to enforce financial discipline or to exert control over enterprises. Thus, banks undertake delegated monitoring on behalf of borrowers. This makes possible the economizing of saver costs and is also preferred by firms because it allows them to deal with only a few specialized monitors.

Banks provide the pooling, trading, and hedging of risks. Most projects require a long-term commitment against liquidity risks by using a suitable mix of liquid and illiquid investments.

It would be costly for firms to mobilize savings from individual savers who may not know enough about them. If banks are efficient in performing their role – allocating resources, monitoring managers, and trading risks – then savers will feel comfortable with entrusting their money to the banks.

Banks help mobilize saving and thereby facilitate specialization, technological innovation, and growth through lowering transaction costs. Greater specialization promotes the exchange of goods and services and, thus, encourages gains in productivity.

By overcoming information asymmetries and economizing costs, banks efficiently channel investments, and play a key role in technological upgrade and innovation.

2. Features of Ukrainian banking

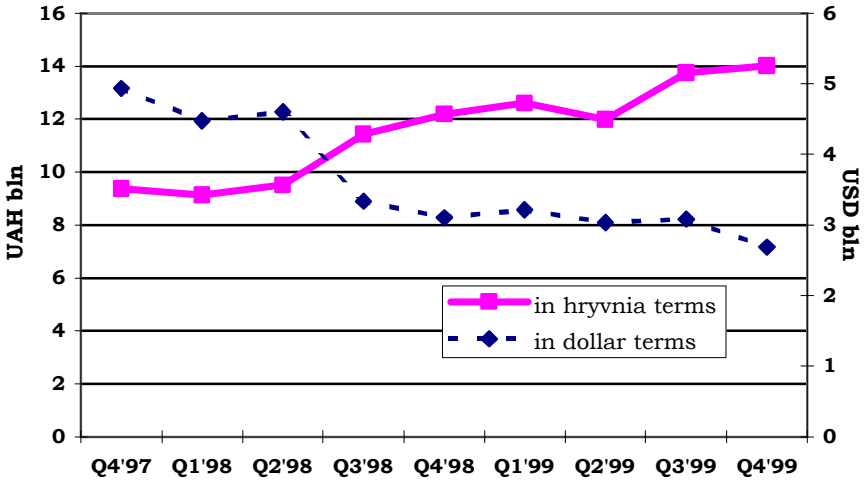
We have analyzed several binding constraints on the development of banks in Ukraine, and have looked at the structure of the credit portfolio, the nature of bank deposits, capital structure, and cash flows. Data from the National Bank of Ukraine (NBU) and the Association of Ukrainian Banks, which were added to the Harvard/CASE database, were of great assistance in our analysis.

Credit portfolio

In 1999, the value of total credit portfolio of Ukrainian banks was equal to 11 percent of annual GDP, which was one of the lowest ratios in Central Europe. From Q4'97 to Q4'99, the credit portfolio grew, in nominal terms, by 44 percent. However, in dollar terms, the credit portfolio declined by 46 percent over the same period (Figure 5).

Figure 5

Credit portfolio, UAH and USD, billion, Q4'97-Q4'99

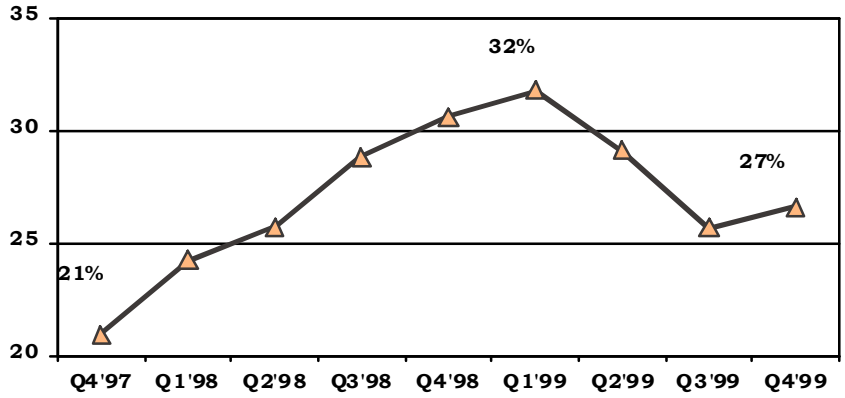


Source: Harvard/CASE database

As of the end of 1999, 27 percent of this portfolio consisted of problem credits (Figure 7). With such a high level of problem loans, commercial banks have to mobilize a large part of their funds for credit risk reserves. As lending remains very risky, this also significantly increases the cost of lending money.

Figure 6

Problem loans, percent of banks' portfolio, Q4'97-Q4'99



Source: Harvard/CASE database

The level of problem loans in the total credit portfolio increased rapidly from 21 to 32 percent from Q4'97 through Q1'99, but declined to 27 percent by Q4'99 (Figure 6). Problem loans hinder the functioning of credit operations and reduce bank profits.

Another drawback is the high proportion of short-term credits (Figure 7). Of the total credits, 56 percent are short term and only 17 percent are long term.[4] Moreover, some of the good credits (both short term and long term) are hidden bad credits. The practice of rolling over credits with irregular servicing (i.e., issuing a new credit to finance an old one) allows bankers not to document all bad credits and thereby avoid a corresponding (required) augmentation of risk-related reserves.

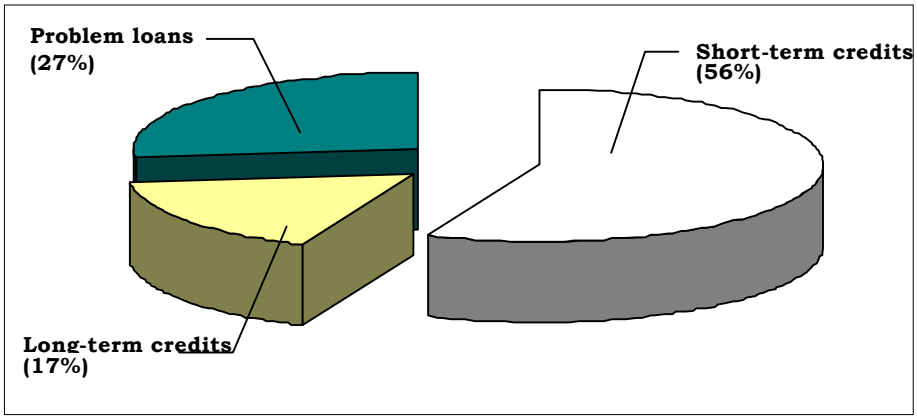
There is little lending to households: only about 5 percent of total credits. With weak property rights, households usually do not have sufficient collateral to secure loans. Also, with continued economic uncertainties, most households are not in a position to predict their future incomes, and are therefore not ready for investment decisions.

The ratio of credits in hard (foreign) currency to total credits as growing. This was mainly due to the depreciation of the hryvnia in the autumn of 1998 and throughout 1999. From Q1'98 through Q4'99, credits in foreign currency grew, in nominal terms, from 37 percent to 54 percent of total credits (Figure 8).

[4] Short-term credits are for one year or less; long-term credits are for more than one year.

Figure 7

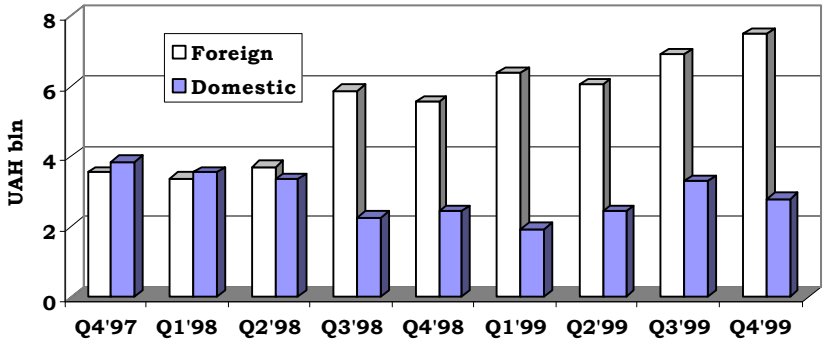
Structure of bank credit portfolio, percent, end of year, 1999



Source: Harvard/CASE database

Figure 8

Credits in foreign currency, in hryvnia terms, and credits in domestic currency, UAH, billion, end of quarter, Q4'97-Q4'99



Note: Problem credits are not included.

Source: Harvard/CASE database

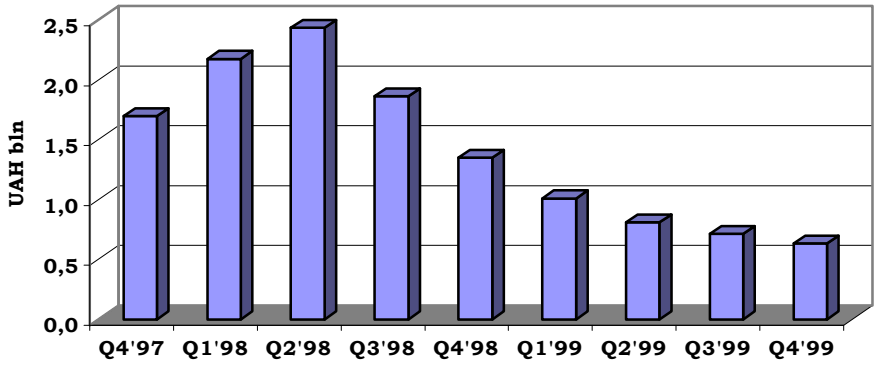
The shift from government securities to deposits in foreign banks

In December 1999, the T-bill portfolio of commercial banks was at UAH 633 million, compared to UAH 2.4 billion in June 1998. In a risky lending environment, government securities used to be one of the few sources of profit for banks. However, the government failure to repay T-bills in the second half of 1998, and the forced restructuring that followed, made this instrument a risky investment. As a result, banks almost stopped buying new government securities

(Figure 9). The existing portfolio consisted mainly of restructured securities that the banks could not get rid of. The banks therefore reorganized their portfolios, switching to deposits in foreign banks

Figure 9

Government securities (T-bills) held by commercial banks, UAH, billion, end of quarter, Q4'97-Q4'99

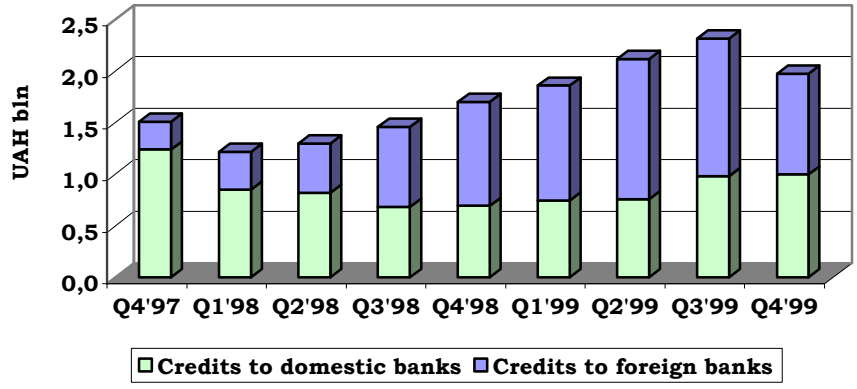


Source: Harvard/CASE database

While the level of interbank credits to local banks declined from UAH 1.2 billion in Q4'97 to UAH 0.9 billion in Q4'99 (UAH 0.6 billion in Q3'98), interbank credits to foreign banks increased from UAH 0.3 billion in Q4'97 to UAH 1-1.4 billion in 1999 (Figure 10). Some of these changes are due to the depreciation of the hryvnia, but to a large extent, they resulted from the loss of confidence in local banks.

Figure 10

Interbank credits to local and foreign banks, UAH, billion, end of quarter, Q4'97-Q4'99



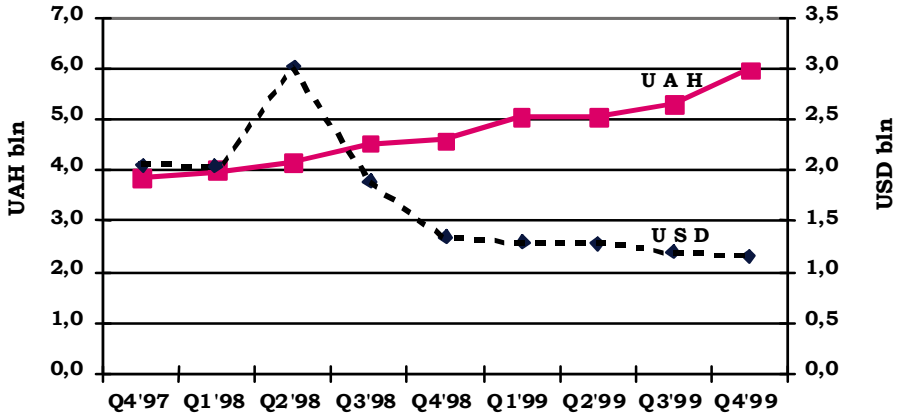
Source: Harvard/CASE database

Bank capital structure

The depreciation of the hryvnia further weakened the already feeble capital structure of Ukrainian banks. Although in hryvnia terms, bank capital grew from UAH 3.9 billion (Q4'97) to UAH 6 billion (Q4'99), in dollar terms, capital shrank by almost a half over the two-year period 1998–99, from USD 2.0 billion to USD 1.1 billion (Figure 11). The increase of capital in hryvnia terms was stipulated, above all, by an increase in reserve requirements. However, bank compliance with reserve requirements was rather weak: instead of the required UAH 1.7 billion, they held less than UAH 1 billion as of June 1, 1999.

Figure 11

Bank capital, UAH, billion, and USD, billion, end of quarter, Q4'97-Q4'99



Source: Harvard/CASE database

Also, part of the expansion of the capital base resulted from capital swap operations – the exchange of new stock issues of one bank for the new stock issues of another. An alternative is to issue credit to, and to purchase additional stocks from the same bank (with the same funds). While this allows bankers to extend the level of capital, it is, we believe, a risky operation. It leads to increased risk in the entire banking sector and, in case of a bank panic, could result in a chain of bank failures, as happened in Bulgaria in 1996.

Effect of hryvnia depreciation on bank deposits

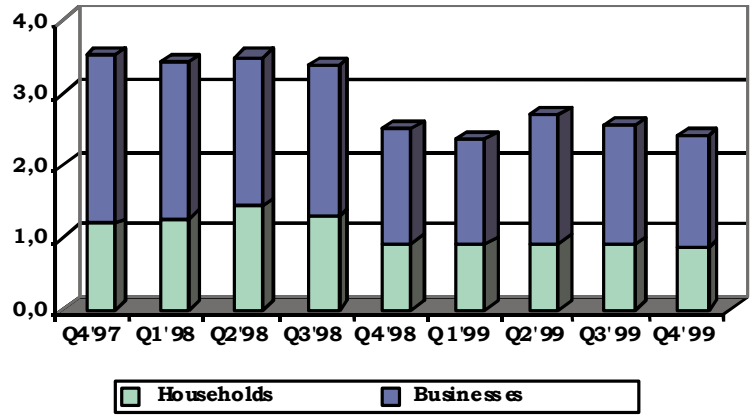
Figure 12 shows how the depreciation of the hryvnia in fall 1998 adversely affected the dollar value of deposits of both households and businesses (total reduction of USD 887 million). This recession continued throughout 1999.

Liquidity

Cash and correspondent accounts (in NBU and commercial banks) increased in 1998, and also in the first two quarters of 1999. This increase was due to changes in the level of obligatory reserves for credit risk requirements from 15 to 17 percent, and to the expansion of the minimum level of capital requirements from ECU 0.75 million to ECU 1 million (April 1, 1999). Correspondent accounts are treated as liquid assets. Theoretically, bank liquidity increased, but the cash in banks remained almost at the same level as in 1997 in nominal terms (Figure 13).

Figure 12

Total deposits, USD, billion, end of quarter, Q4'97-Q4'99



Source: Harvard/CASE database

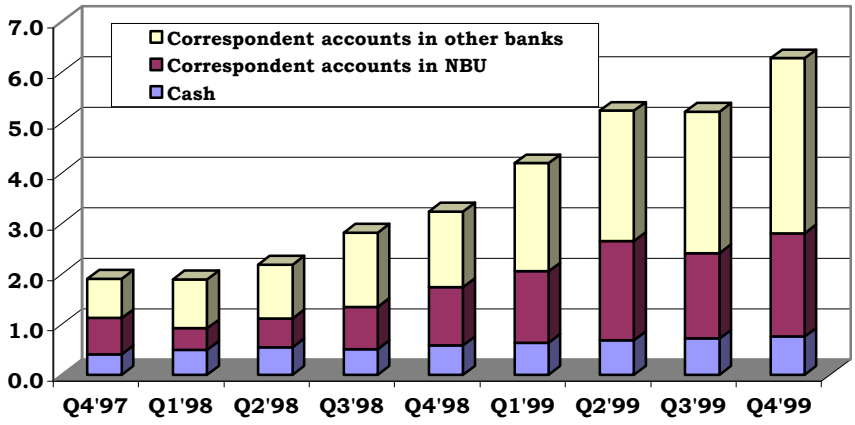
By the end of Q4'99, cash in Ukrainian banks amounted to UAH 755 million, or 1.4 percent of total bank assets. At the same time, cash as a percentage of liquid assets dropped from 26 percent for Q1'98 to 14 percent for Q1'99. The increase of total liquid assets in hryvnia terms was due to the expansion of correspondent accounts in accordance with the restrictive NBU policy. For 1998 and 1999, cash as a percentage of total assets and of liquid assets declined (Figure 14).

3. Why Ukrainian banking sector is not growing

Several external factors hinder the normal functioning of the banking system in Ukraine. These factors together discourage both borrowers and lenders from using banking services, and most of these factors are a direct or indirect result of government policies.

Figure 13

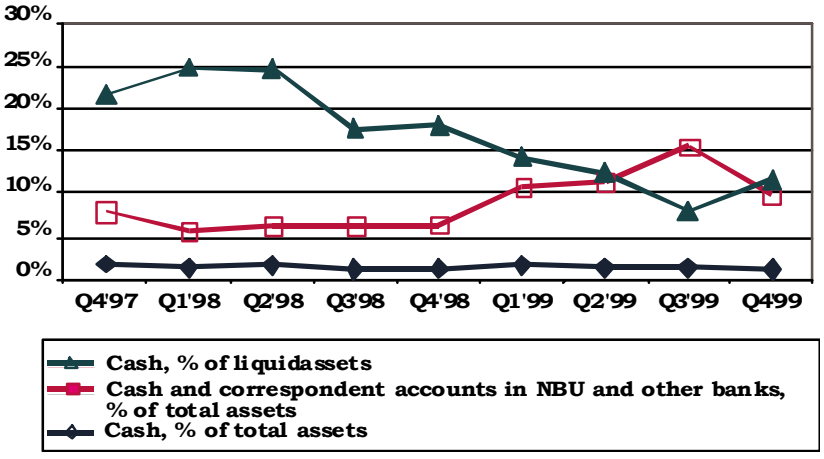
Cash and correspondent accounts, UAH, billion, end of quarter, Q4'97-Q4'99



Source: Harvard/CASE database

Figure 14

Liquidity ratios, percent, end of quarter, Q4'97-Q4'99



Source: Harvard/CASE database

Tax collection and Kartoteka #2

Banks in Ukraine act as tax collectors. Under the "*Kartoteka #2*" system, money coming into the bank accounts of firms with tax arrears is automatically deducted for payment of those arrears. As

a result, firms avoid transactions through banks. It is not so much the *Kartoteka* #2 system itself, as the intensity with which it is implemented by the tax administration that is driving firms away from the banking system. As of March 1, 1999, *Kartoteka* #2 charges on the banks were UAH 52 billion, which was higher than the total assets of the banking system (UAH 37 billion). This imposed a high cost on the banks. *Kartoteka* #2 was actually abolished by presidential decree in June 1999, but this decree has not been implemented.

Directed lending and government-guaranteed loans

According to the banks, the volume of credits they provided at the "request" of the government was UAH 1.6 billion. Although such lending is guaranteed by the state, these obligations are not always met. The loans are often directed to loss-making enterprises. This adversely affects the development of financial markets in Ukraine: it imposes an additional cost on banks and depresses profitability.

Weak implementation of banking regulations

Implementation of banking regulations is weak in Ukraine, and the status of the National Bank as the regulator of the banking system is still ambiguous. As of March 1, 1999, 24 banks (out of 214) had statutory funds lower than the required EURO 1 million; 49 banks, including all the largest, did not meet the reserve requirement ratio. Many small banks continue to operate, even though they fail to achieve economies of scale and are not economically viable.

Problems with credibility

The unclear valuation of firm assets and the weakness of the land market leave banks with little collateral on which to hedge their lending. Weak contract enforcement also makes it difficult for banks to lend at reasonable rates. Inadequate bankruptcy procedures mean that banks are rarely able to recover their funds through the liquidation of enterprises. These risks make lending to firms unattractive and expensive for banks. Many banks made most of their profits from the T-bill market, but the inability of the Government to redeem T-bills in the autumn of 1998 and throughout 1999 left the banks with little opportunity for profitable activity. Many of them increased their deposits in foreign banks, rather than lend to the non-financial sector in Ukraine.

The land market in Ukraine remains underdeveloped. Because the procedures for privatizing and purchasing land are very complicated, a large part of the land remains in state or collective ownership (as of December 1999, only 3.5 million hectares, or about 5.5 percent of all land, was privately owned). Under Ukrainian law,

foreign citizens and businesses with foreign capital are not allowed to own land. This creates additional obstacles for many new companies to receive credits from Ukrainian commercial banks. Although the legislation gives firms and individuals the right to use their privately-owned land as collateral, most firms and individuals lack formal title to the land they own or use.

Exchange risks and barter

The exchange rate regime relied on currency corridors which the Government was unable to support. As a result, exchange rate risk was high. This increased the cost of lending and stimulated demonetization of the Ukrainian economy.

Figure 15 shows how the above-mentioned factors make banking unaffordable in Ukraine. Under normal market conditions, the supply for banking, *S,* and its demand, *D,* would have resulted in a quantity, *q,* of banking services at a price (rate of interest), *r*. However, in Ukraine, there is a large shadow economy sector which avoids the official banking system. This brings the demand curve down to *D'*. At the same time, the high costs due to the factors mentioned above push the supply curve up to *S'*. At this level, only the T-bill market is able to make use of banking at a very high rate, r^{TB}. At this rate, however, credits are not affordable for the rest of the economy. The demand for banking *(D')* does not meet the supply *(S')* at any positive level of banking. This illustrates why there is not much banking in Ukraine. At the end of 1999, long-term lending of commercial banks to the private sector amounted to UAH 420 million, or equivalent to only USD 1.6 per capita.

A weak banking system was vulnerable to external shocks. The financial crisis of 1998 resulted in an overall loss to the Ukrainian banking system of about UAH 153 million. Depositors lost an equivalent of USD 1 billion due to the sharp hryvnia depreciation, while bank capital fell by USD 700 million. At the same time, bank holdings of problem loans (officially recognized) almost doubled.

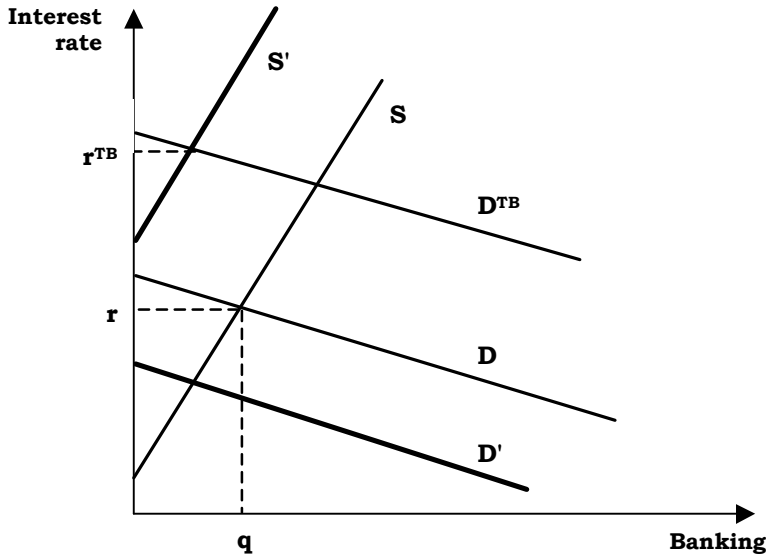
4. Agenda for policymakers

In order for the banking system to develop, it is necessary to remove the impediments to its growth. This would help reduce the high transaction costs incurred by banks, and in turn pull the supply curve down to meet the demand curve at a positive level of banking. It is also important for the government to ensure that the removal of *Kartoteka* #2 is implemented. There is an urgent need to develop

the system of collateral and the land market, and to establish effective bankruptcy procedures.[5]

Figure 15

Banking, supply and demand analysis



The forced restructuring of T-bills and frequent abandoning of the commitment created by the currency corridor undermined the Government's credibility. Contract enforcement should start with the Government. We welcomed the decision to establish a managed float currency regime at the beginning of 2000.[6] The false sense of security created by a currency corridor was detrimental to investment decisions.

To build credibility in banking, renowned foreign banks should be encouraged to operate in Ukraine. Simultaneously, foreign exchange operations should be further liberalized.

Political and legal impediments to financial development are usually difficult to overcome. However, even under conditions of macroeconomic stability, insufficient institutional development in the banking system creates a poverty trap. Only a well-regulated banking system, free of detrimental constraints, can perform the role of financial intermediation which is essential for growth.

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[5] In 2000-2001, a significant progress was made. A new bankruptcy law was implemented and *Kartoteka #2* was gradually abolished.

[6] A managed float can help prevent temporary monetary shocks. It will enable the exchange rate to adjvet smoothly in case of real shocks.

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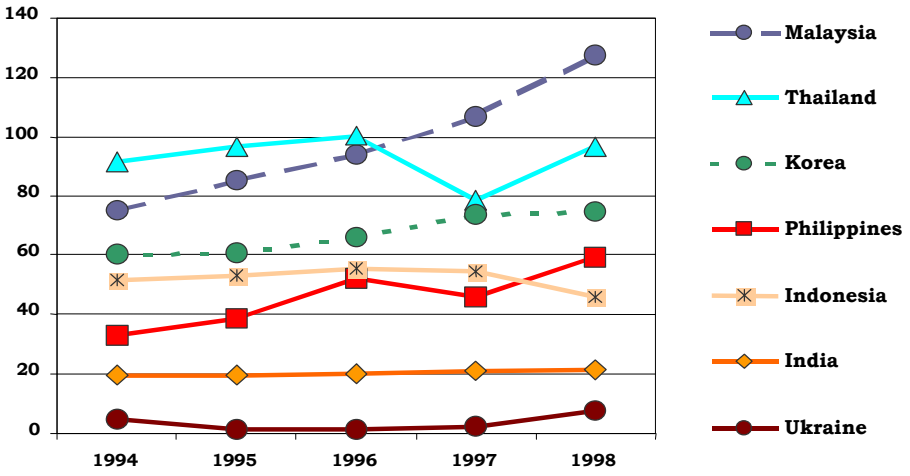
APPENDIX

Figure A1

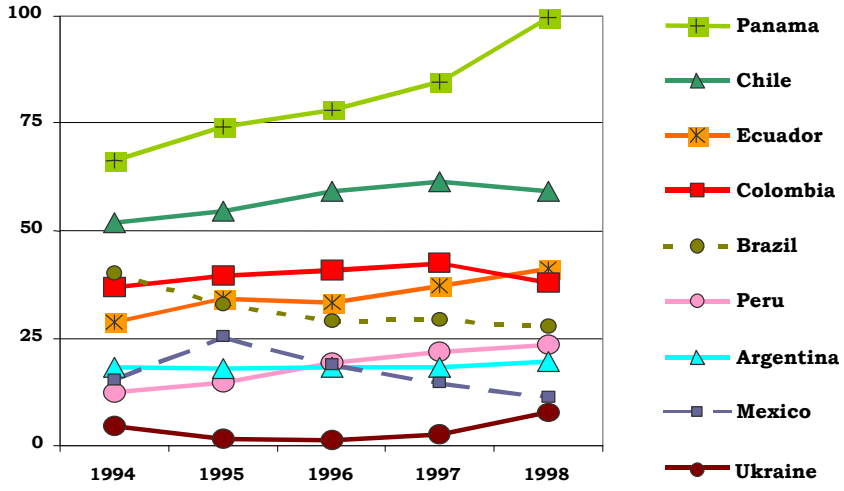
Bank loans to private sector, percent of GDP, Ukraine and East Asian countries, end of year, 1994-1998



Source: Emerging Markets (1998)

Figure A2

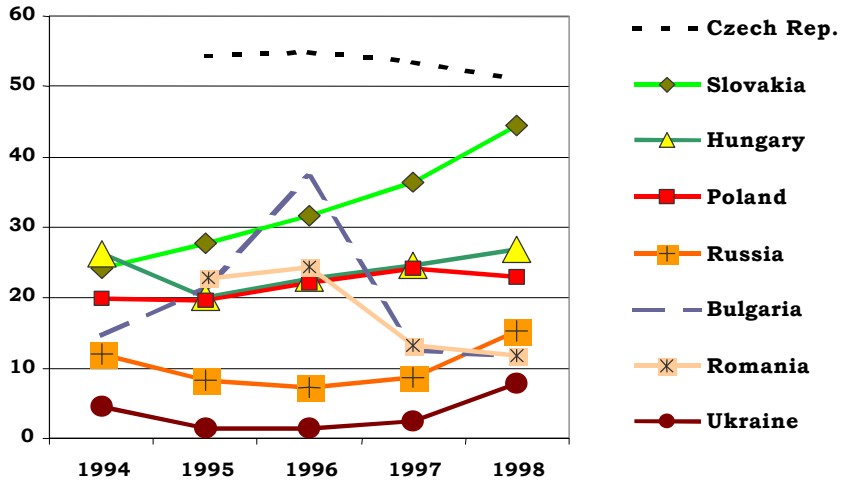
Bank loans to private sector, percent of GDP, Ukraine and Latin American countries, end of year, 1994-1998



Source: Emerging Markets (1998)

Figure A3

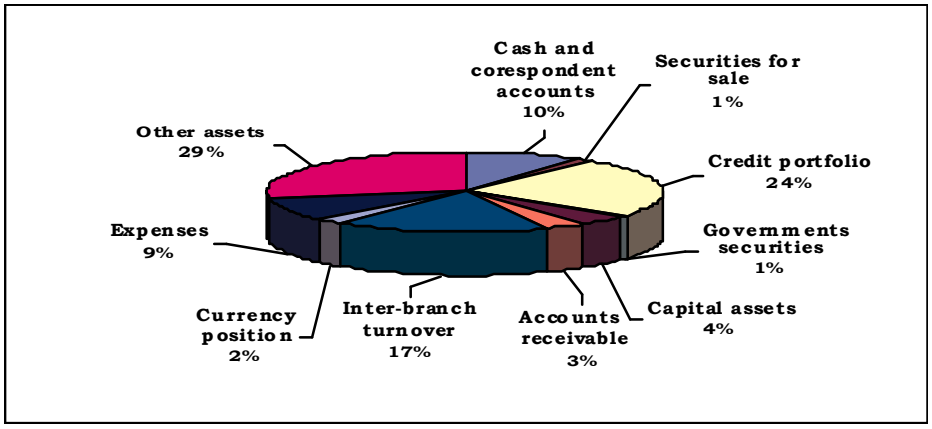
Bank loans to private sector, percent of GDP, Central Europe, end of the year, 1994-1998



Source: Emerging Markets (1998)

Figure A4

Structure of assets of Ukrainian commercial banks, percent of total bank assets, end of quarter, Q4'99



Source: Harvard/CASE database

Institutional Development of the Banking System[1]

Janusz Szyrmer

and Inna Golodniuk

Introduction

A mature and efficient banking system plays a critical role in economic development. Schumpeter (1934) argues that well-functioning banks spur technological innovation by selecting and supporting those entrepreneurs who possess the best chances for success in their investment activities. A growing body of empirical evidence suggests a strong positive relationship between financial development and economic growth (Levine, 1997). As it turns out, progress in financial development is useful for predicting future rates of growth, capital accumulation, and technological change. By reducing information asymmetries and diminishing transaction costs, financial intermediaries increase factor productivity and stimulate growth.[2]

According to the Marxian doctrine, financial intermediation is a parasite-type activity that absorbs much income while failing to deliver useful output. Unlike the "real" sector, the financial sector does not produce any new utility, but only redistributes goods created elsewhere in the economy. This ideology led to an almost complete annihilation of the financial sector in the FSU countries. This in turn caused a systematic misallocation of resources and undermined the long-term efficiency of the Soviet economy.[3] The

[1] The authors acknowledge the contributions of Anatoliy Drobiazko, Volodymyr Domrachev, and Olga Pogarska to this chapter.

[2] See also "Role of the Central Bank in the Development of Banking" in this volume.

[3] Ludwig von Mises: "The problem of economic calculation is … essentially a matter for the capitalists, who buy and sell stocks, make loans and recover them, speculate in all kinds of commodities. These operations of speculators … create the data to which managers have to adjust their business and which therefore give direction to their trading operations" (Szyrmer, 2000).

weakness or absence of the financial sector was a significant factor which contributed to the political, economic, and social collapse of the Soviet state.

Financial development has been slow during the post-Soviet transition. Moreover, it has lacked strong support from policymakers, for which there are many reasons, such as:

- **lack of understanding**: in the early stages of transition, the focus was on (macroeconomic) stabilization and (microeconomic) liberalization, with less attention paid to financial institutions;
- **problems with measurement**: the development of the financial sector does not produce tangible results, like an increase in industrial output or a reduced level of inflation;
- **long-run nature**: financial development does not have immediate effects on economic growth; instead, it creates an "environment" which stimulates savings, investment, and growth over a longer period of time, and is therefore not treated as a high priority by political leaders who tend to focus on short-term issues;
- **economic transparency**: a strong financial sector improves the overall transparency of economic activities and makes governmental interference, bureaucratic micro-management, and shadow transactions (corruption, tax evasion, etc.) more difficult; thus, powerful interests block the institutional development of this sector.

The strategy used during the 1998 financial crisis illustrates these problems. Preference was given to supporting stability - to keep currency depreciation and price inflation at relatively low levels - at the expense of the banking industry and its clients. In political terms, low inflation was perceived as a greater achievement than effective protection of financial markets, banking activities, and people's saving accounts. Thus, Ukraine successfully escaped a major macroeconomic destabilization, but banks suffered substantial losses and their deposit holders lost about half of their savings in the process. Thus, those who kept dollars under their mattresses were again the winners. In the wake of the crisis, high interest rates had to be offered to lure savings back to bank accounts and credits therefore remained very expensive. The eventual effect on the "real" sector was painful.[4]

In this chapter we will focus on Ukrainian banking, although our analysis is indirectly relevant to the entire financial sector, given that the banking system is its main "representative."

[4] See "Financial Sector Development as a Central Bank Target in Transition Economies" in this volume.

Our objective is to monitor institutional transformations. We identify the relevant indicators, which are used as proxies for these transformations, much in the same way that GDP and real average wage rates are used to evaluate current performance of the directly "observable" economy. Monitoring institutional progress in banking and elsewhere, along with the changes in output, income, and prices, enables us to evaluate the overall performance of a given economy and to assess the success of particular policies and strategies. Otherwise, if institutional development was not explicitly monitored and evaluated, the analysis would remain shallow and "technocratic" in the sense that it would be confined to only short-term "external manifestations" of the economy and would neglect its institutional fundamentals. The development of these fundamentals is of crucial importance to any country, but especially to all FSU countries struggling with "incomplete market" impediments.

We are looking for those proxies that reflect the performance of Ukrainian banks with respect to their major functions – reducing the costs of resource allocation and the efficient channeling of capital between savers and investors. These proxies should also reflect the direction of institutional changes in the financial sector and enable us to monitor the performance of policymakers by examining the impact of their policies on banking.

We consider the main functions of a bank (a financial intermediary), select indicators for monitoring the fulfillment of each of these functions, and use these indicators to analyze Ukraine's financial development over the past several years.

While diminishing the transaction and information costs, a financial sector fulfills one primary task: it facilitates the allocation of resources across space and time in an uncertain environment (Merton and Bodie, 1995). This task may be broken down into five basic functions (Levine, 1997):

1. Mobilizing savings and stimulating investment
2. Allocating resources
3. Monitoring managers and exerting financial control
4. Hedging, diversifying, and pooling risks
5. Facilitating transactions

1. Mobilizing savings and stimulating investment

This function involves the accumulation of savings, which are channeled to direct investments in the economy. By abating information asymmetries and reducing risks involved in investment decisions, the banking industry motivates economic actors to save more and consume less.

The ratio of total bank deposits to annual GDP can be used to measure the success of the banks in attracting household and business savings. This ratio, calculated for time deposits, reflects the overall capacity of banks to support enterprise investment activities. Time deposits are defined as those bank accounts that have a fixed maturity length ranging from several months to several years, and often involve penalties for early withdrawal.

In Ukraine ***the ratio of household and business time deposits to GDP*** has remained at a low level when compared with other transitional economies (Figure 1). Banking systems in countries like the Czech Republic, Slovakia, or Hungary, which were more successful in implementing institutional reforms and well-grounded policies, are stronger and have a significantly higher capacity to pool and channel large amounts of savings.

Nonetheless, the overall trend in Ukraine has been positive. Over the past several years, household and business time deposits have been growing steadily (Figure 2). The rate of growth was the greatest in 2000, 1.2 percentage points, which reflected an overall improvement in bank services and the terms of deposit contracts, such as higher real interest rates on deposits, the introduction of personal pension accounts, and the increased speed of transactions. The lessons taught by the financial crisis of 1998, when most depositors lost a large portion of their savings, forced commercial banks to offer more favorable terms in their deposit contracts. Thus, higher real interest rates and diverse forms of hedging exchange rate and inflation risks were introduced. Many banks now guarantee their depositors the dollar-equivalent return on their principal.

2. Allocating resources

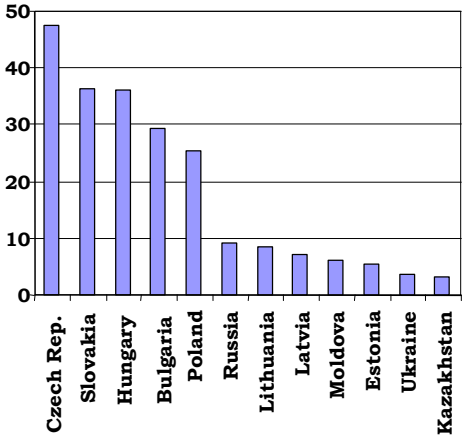
Efficient resource allocation is another important function of banks. Individual savers may not be able to collect and process information on a variety of possible investments. Consequently, the high cost of acquiring information could prevent capital from flowing to its most productive uses. For individual savers, it may be very expensive, if at all possible, to acquire the necessary investment evaluation skills to collect relevant information and to monitor the performance of a large number of investments. Taking advantage of specialization and significant economies of scale, banks are able to perform these tasks as a service to their clients. As a result, capital goes to those investors which are expected to give the best returns. To assess the performance of domestic banking in allocating resources the following indicators are selected:

- ratio of long-term loans to total loans

- ratio of long-term loans to total investments
- ratio of private sector bank credits to GDP
- variation in interest rates on deposits

Figure 1

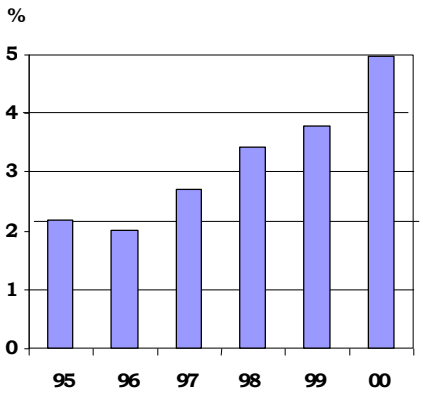
The ratio of time deposits in banks to GDP, percent, selected transition countries, end of year, 1999



Sources: Web pages of the central banks

Figure 2

The ratio of time deposits in banks to GDP, percent, end of year, Ukraine, 1995-2000



Source: Harvard/CASE database

In the macroeconomic sense, long-term loans support total investments, while short-term loans support (short-term) borrower liquidity. The term "investment" involves, among other things, the formation of new fixed capital (buildings and equipment); this is usually a lengthy process and requires a long-term commitment of capital and effort. Long-term loans are assumed to support this process. ***The ratio of long-term loans to total loans*** may be used as an indicator of the overall contribution of banks in allocating resources to total investments and growth.

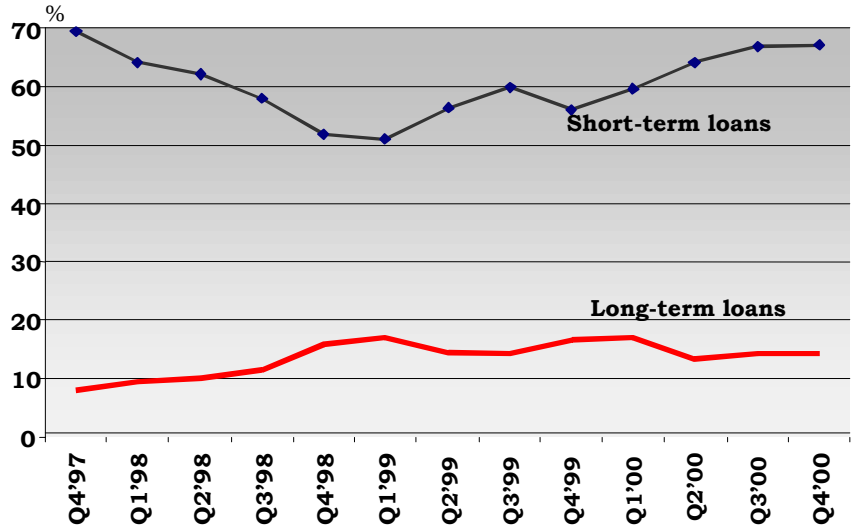
The behavior of Ukrainian banks (Figure 3) does not show any significant changes in the crediting pattern. Although it is true that the year 2000 saw quite a substantial growth in the volume of loans provided by domestic banks,[5] most of the funds were used for short-

[5] In 2000 the credit portfolio of domestic commercial banks (stock) grew by about 64 percent (from UAH 14 billion to UAH 23 billion), which is a significant increase given that year-on-year inflation rate was about 25 percent.

term needs. Since 1998, the proportion of long-term loans in bank portfolios has been fluctuating in the 10–17 percent range. In 2000 the share of long-term loans remained at about 14 percent of the total credit portfolio. Thus, Ukrainian banks help enterprises with their liquidity needs, rather than with large investment projects.

Figure 3

Long-term loans and short-term loans, percent of total credit portfolio, Q4'97-Q4'00



Source: Harvard/CASE database

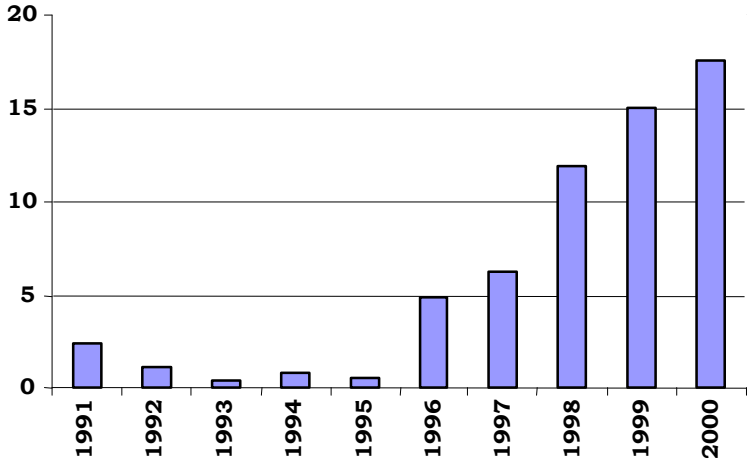
At the same time, according to another important indicator – ***the ratio of long-term loans to total investments***[6] – the role of banks in supporting the country's investment activities has strengthened over the past several years (Figure 4).[7]

[6] Here, the term "investment" is used in the macroeconomic sense: GDP minus total consumption minus net exports.

[7] However, this ratio should not be interpreted as a percentage of total investment financed by bank loans. Long-term loans, according to the classification used in Ukraine, are those maturing in more than one year. Whereas total investments cover only a one year period.

Figure 4

The ratio of long-term loans to total investments, percent, 1991-2000



Source: Harvard/CASE database

The industrial structure of long-term loans was the following: about 32 percent were lent to Trade, 9 percent to Food, 6 percent to Agriculture, 8 percent to Machinery, 6 percent to Transportation, and 5 percent to Ferrous Metals. The remainder (about 34 percent) were dispersed in small amounts among all the other industries (Bulletin, 2001/2). In some industries - for example, in Food Processing - long-term loans seem to be used relatively efficiently. Investment in Food Processing is done on a competitive basis: there is a low level of government intervention, and the banks allocate credit according to economic rather than political criteria. On the other hand, the Machinery and Metals factories are, as a rule, state-run and inefficient in the use of their capital.

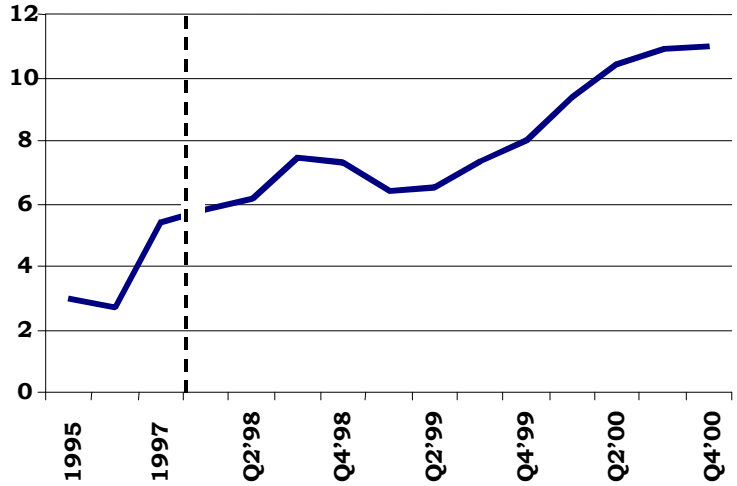
There is empirical evidence suggesting the existence of a positive relationship between lending to the private sector and economic growth: countries in which private lending is high and expanding have higher levels of growth.[8] This finding appears to be quite logical given that lending to the private sector is usually driven by economic rather than administrative levers. Moreover, private enterprises – rather than consuming borrowed funds - usually invest in projects, which generate economic returns. Thus, a high volume of credits directed to the private sector can be viewed as an indication of the significant contribution of banks to allocating resources that support economic growth. In Ukraine, ***the ratio of***

[8] See "Finance and Growth" in this volume.

private sector bank credits to GDP has remained low, although its level increased quite substantially, from 3 percent in 1995-96 to 11 percent at the end of 2000 (Figure 5). In countries like Poland, Hungary, and Slovenia this number approaches 30-40 percent.

Figure 5

The ratio of bank credits to the private sector to GDP, percent, 1995-1997, annually, end of year, and 1998-2000, quarterly, end of quarter

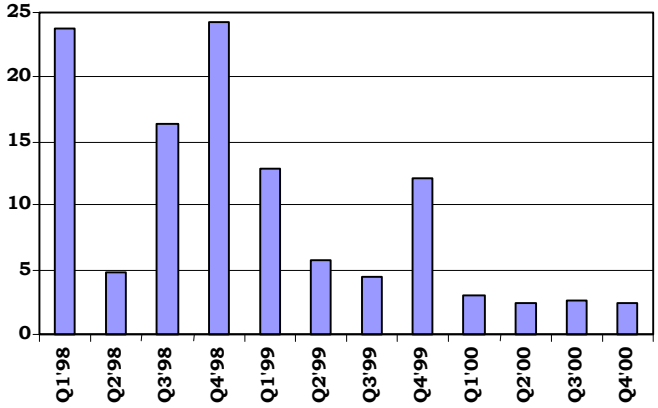


Source: Harvard/CASE database

The interest rate is the price of borrowed funds. In accordance with economic theory, a large discrepancy in the price of similar (homogeneous) goods or services indicates an allocative inefficiency. Hence, a large ***variation in interest rates on deposits*** suggests the inefficient allocation of financial resources. Poor accounting and auditing standards, high market segmentation, and frequent nontransparent transactions between lenders and borrowers are important factors contributing to these differences. Some banks only "specialize" in servicing a limited number of specific enterprises, and behave as book-keepers for their clients, rather than as commercial banks operating in a competitive market. Moreover, the banking industry is subject to various pressures from the central and local authorities. While all these market distortions were present in the Ukrainian banking industry in 1998-2000, the rapid convergence in interest rates (Figure 6) suggested that the situation was improving and resource allocation was becoming more efficient.

Figure 6

Variation in interest rates on deposits, percent, Q1'98-Q4'00



Note: The variation in interest rates is the spread of the interest rates, offered by various banks, around the average rate for the banking system. It can be measured by the variance defined as

$$Var\ (Interest\ \ rate) = \frac{\sum_{n=1}^{N} (i_{av} - i_n)^2}{N}$$

where i_{av} – average interest rate, i_n – interest rate offered by bank n, and N - number of banks analyzed. The variance was calculated for interest rates on term deposits of individuals for 6-12 months. As these services are available in all commercial banks, they can be viewed as homogeneous goods and their prices can be compared.

Source: Harvard/CASE database

3. Monitoring managers and exerting financial control

After providing funds to an enterprise, a lender should be able to actively monitor the enterprise's performance (to make sure that the money is used well) to prevent any income losses. For obvious reasons, collecting the necessary information and influencing management decision-making cannot be done by small individual investors. Given the scale of their operations, large banks are able to establish effective controls over an enterprise in order to protect the interests of outside creditors.

The following indicators may be used to assess the capacity of banks in exerting corporate control: bank credits as a percentage of enterprise liabilities and the size of *Kartoteka #2*. The latter is an important indicator for Ukraine but, obviously, this would not apply to countries without *Kartoteka #2* or some similar system.

The larger ***the proportion of bank credits in enterprise liabilities***, the more the enterprise is dependent on the arrangements with its bank(s) while conducting its business. This implies an increased capability on the part of the bank to collect information and influence the operation of the enterprise.

In most industrialized countries, bank loans are the primary source of external funds for non-financial businesses.[9] In the US, for example, bank credits provide about 60 percent of total external funding to non-financial businesses (Mishkin, 1997, pp. 195-97), whereas in Ukraine the corresponding number approaches only 7 percent.

The situation in Ukraine is explained mainly by the high interest rates on loans. The banks must charge higher rates for the money they lend in order to cover the high risks involved. In turn, this makes loans very expensive and raises the likelihood of default and so on. Moreover, banks continue to carry out a number of controlling activities, such as the monitoring of tax payments. A combination of these factors forces enterprises to seek funds outside the banking system. A typical funding source is the inter-enterprise credit that firms provide to their clients (purchasers of their output) to be able to sell (and stay in business). Thus, it is not a healthy situation when most financial credits are provided by non-bank enterprises.

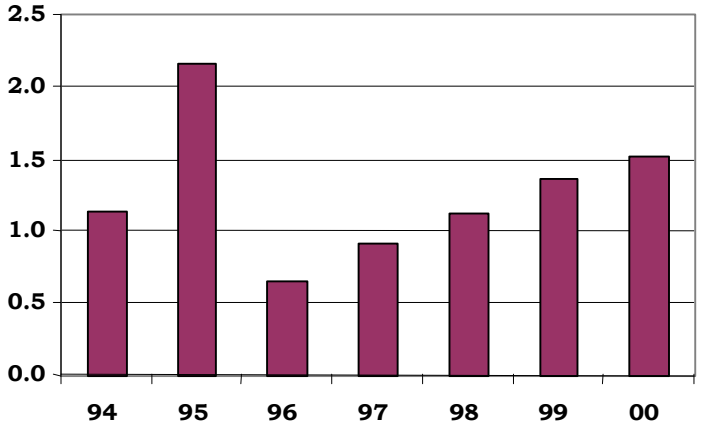
Liabilities to the banking system constitute only about 1 percent of total consolidated liabilities of all Ukrainian enterprises (financial and non-financial), from which it may be inferred that the banks are hardly able to exert corporate control. Since 1997 the proportion of liabilities to banks in total enterprise liabilities has been growing, but still remains at a low level (Figure 7).

The *Kartoteka* mechanism transfers control to the tax administration which imposes financial measures on enterprises, placing its own claims above those of banks and investors. Cash entering the bank accounts of firms with tax arrears is automatically confiscated by the tax authorities and other institutional creditors (Antczak and Ivashchenko, 1997; and Dubrovskiy, 1999). As a result, bank control over corporate finances is limited. ***The size* of *Kartoteka #2*** is therefore inversely related to the degree of financial control banks have over enterprises. Moreover, servicing *Kartoteka #2* imposes large additional costs on a bank, leading to higher transaction costs and lower intermediation efficiency. Despite the significant reform efforts of Ukrainian policymakers, *Kartoteka #2* continued to grow in 1997-2000 (Figure 8). Since the beginning of 1999, the size of *Kartoteka #2* has even exceeded the total assets of the banking system.

[9] The "external funds" denote all funds obtained from outside the business itself.

Figure 7

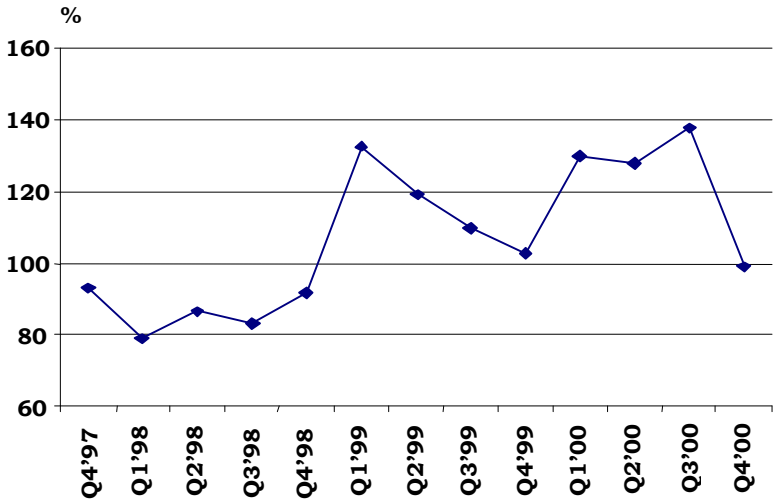
Enterprise liabilities to banks, percent of total enterprise liabilities, 1994-2000



Source: Harvard/CASE database

Figure 8

The ratio of *Kartoteka #2* to total assets, percent, Q4'97-Q4'00



Source: Harvard/CASE database

4. Hedging, diversifying, and pooling risks

High-return projects usually require the long-term commitment of large amounts of capital. As a rule, however, savers do not want to relinquish control of their savings for long periods. They also prefer to invest their capital into several, as opposed to one project in order to diversify the risk. Banks address this problem by pooling out resources from a large number of savers, and lending them to a large number of borrowers. This portfolio diversification helps savers to manage their risks. In addition, banks maintain a certain amount of reserves to insure against risky assets in their portfolios.

As discussed above, a bank should possess the skills necessary to evaluate whether a given investment is worthwhile. By lending to financially insecure borrowers, a bank misdirects its resources – in many cases these resources would be kept away from more successful enterprises – and fails to properly perform its function of facilitating risk management. ***The share of problem loans in the portfolio*** of a bank is a good indicator for evaluating its performance. In this respect, a high share of problem loans (bad, prolonged, and overdue loans)[10] suggests poor performance on the part of a bank.

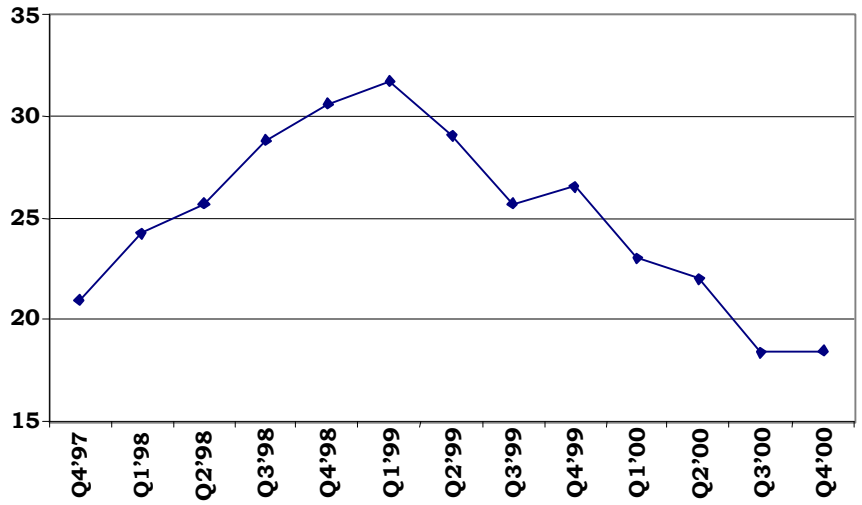
Judging from the dynamics of problem loans in their portfolios (Figure 9), Ukrainian banks significantly improved their risk management in 2000: in the course of the year, this share dropped from 27 to 17 percent. A large part of the risk seems to be "bank-specific" rather than "system-specific." In other words, the magnitude of the risk depends on the capacities of banks to manage risks (and perhaps their capacities to withstand external pressures from both the authorities and powerful interests). In fact, some Ukrainian banks consistently maintained a relatively low share of problem loans in their portfolios, while the share for others has always been much higher. This confirms a perception that the quality of risk management significantly varies among Ukrainian banks (Table 1).

Banks with 100 percent foreign capital usually applied better management techniques and were more successful in resisting external pressures and avoiding high risks. As a result, problem loans were rare in these banks. The majority of large Ukrainian banks, however, had a high share of problem loans in their portfolios, and in most cases this was higher than the average for all banks. Nevertheless, the fact that the average share of problem loans decreased indicated that domestic banks had improved their risk management.

[10] To ensure solvency, the NBU requires commercial banks to maintain reserves equal to 100 percent of the bad loans in their portfolios. It could be that banks reschedule their bad loans and show them as extended loans. For this reason, we use for the purpose of our analysis the total amount of extended, overdue, and bad loans in bank portfolios.

Figure 9

The share of problem loans in bank credit portfolios, percent, Q4'97-Q4'00



Source: Harvard/CASE database

Table 1

Problem loans as a share of bank credit portfolio

	Problem loans, percent of credit portfolio	
	As of January 1, 2000	As of January 1, 2001
Large banks	**34.2**	**24.8**
Prominvestbank	29.6	15.1
Ukrsotsbank	29.3	21.8
Ukraina	72.1	71.7
Privatbank	15.7	22.6
Oshchadbank	45.2	29.0
Aval	15.7	8.3
Banks with 100% foreign capital	**5.4**	**2.8**
Medium and small-sized banks	**17.6**	**15.2**
All	**26.7**	**17.2**

Source: Harvard/CASE database

5. Facilitating transactions

The banking system reduces transaction costs and thus stimulates specialization, which, in turn, helps productivity and growth. We have selected the following indicators to evaluate the performance of the banking system in facilitating transactions: percentage of money outside the banking system and interest rate spread. The higher these indicators are, the worse the performance.

Money outside the banking system as a percentage of money supply is an indicator that helps us evaluate the overall health of the banking system. If a substantial portion of the money supply circulates outside the system, economic agents avoid conducting their transactions through banks because of the problems inherent in this system - high risks and/or high transaction costs. In addition, a poorly performing banking system stimulates the expansion of the shadow economy, which has a negative effect on the former. Thus, a powerful relationship of negative feedback develops.

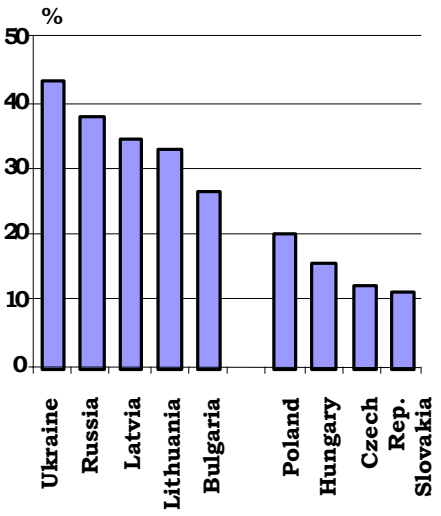
This point is consistent with the pattern of money supply allocation in transition economies. Those economies that are considered to be more successful in their transitions, and which have better functioning banking systems, tend to have a lower portion of money outside their banking systems, compared to other CEE countries (Figure 10). Although Ukraine belongs to the latter group, one can observe a steady tendency for money to flow into banks (Figure 11), including an inflow of deposit savings, as discussed above.

Interest rate spread is calculated as the ratio of (1) difference between interest rate on credits and interest rate on deposits, to (2) interest rate on credits. This indicator can be used as a proxy for the degree of inefficiency of a bank in acting as an intermediary between savers and borrowers. It measures the proportion of funds raised from crediting which is absorbed by the banking system, rather than acquired by the investor (the owner of a deposit).

Currently approximately 70 percent of the money that Ukrainian banks earn from loans remains within the banking system, and 30 percent is returned to depositors, which is significantly less than in many other countries of the region (Figures 12 and 13). Transaction costs have remained high for the last three years, mainly due to the huge *Kartoteka #2*, high taxes, and the inability of banks to effectively manage their operational expenses.

Figure 10

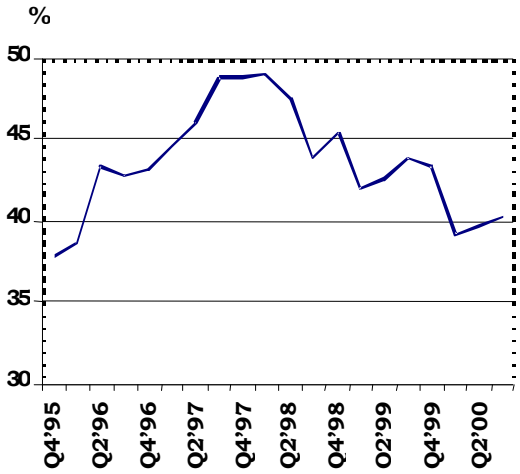
Money outside banks, percent of M_3, transition countries, Q4'99



Sources: Web pages of central banks

Figure 11

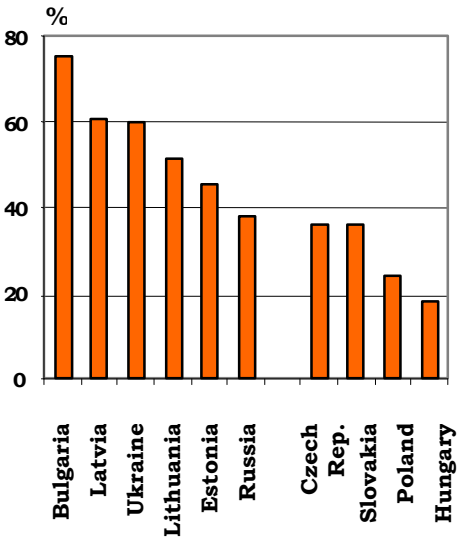
Money outside banks, percent of M_3, Ukraine, Q4'95–Q3'00



Source: Harvard/CASE database

Figure 12

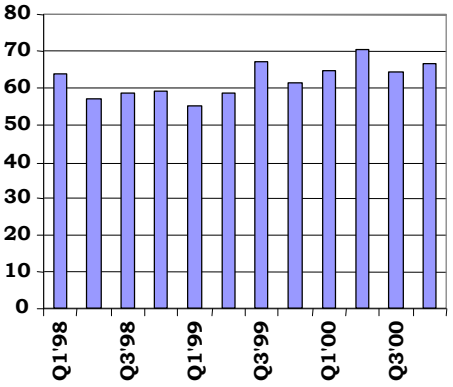
Interest rate spread, percent, transition countries, 1999



Sources: Web pages of central banks

Figure 13

Interest rate spread, percent, Ukraine, Q1'98–Q4'00



Source: Harvard/CASE database

Conclusion

We believe that Ukraine can serve as an excellent case study for the role of the financial system in an economy. What we observed in Ukraine during the last decade provided us with a good illustration of, and yet another piece of evidence to support, the hypothesis presented above by Schumpeter, and systematically tested by Levine: the performance of the financial system and its banking industry is a good proxy for the current level of economic development and for future growth. A strong and growing banking system today means a strong and growing economy tomorrow. A weak banking system reflects a weak economy and weak prospects for future growth.

The transition period in Ukraine may be divided into several stages:

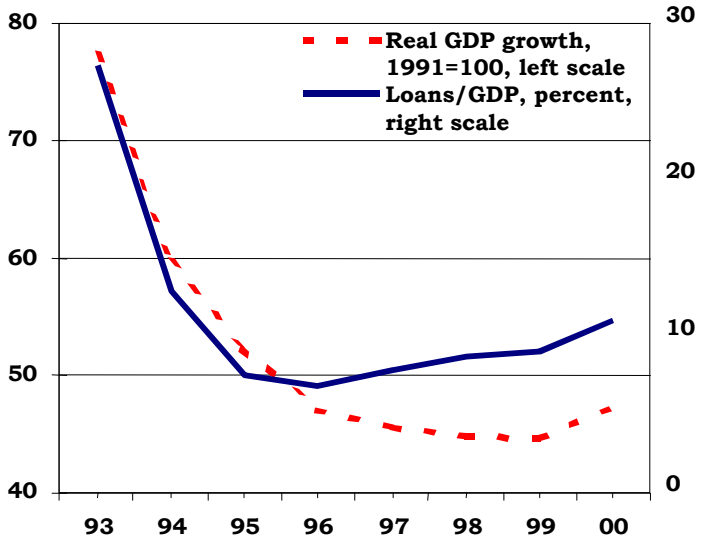
Stage 1. ***Early 1990s***. The economy is still operating under the old Soviet institutions and is dominated by large state-owned factories - predominantly 19th century-type heavy industries with a focus on the military sector. Nominal GDP is relatively high. The whole consumer-oriented sector is weak, living standards are low, and the natural environment is devastated. Heavy distortions in prices and resource allocation prevent sustainable (and reasonable) economic growth. In this context, the banking industry is nominally large but fails to play any active role in the economy. Of the five banking system functions analyzed in this paper, only the facilitation of transactions is being performed (in a way). The passive and heavily distorted banking system reflects an economy in a state of imminent collapse.

Stage 2. ***Mid-1990s***. The anticipated collapse of the economy is taking place. The banking sector is heavily affected, and its assets and activities are diminished by several times. The banking system, barely operating, supports a pessimistic forecast for the economy which is reflected in the gradual decline of GDP and a very low level of foreign direct investment in Ukraine.

Stage 3. ***Late 1990s.*** Sluggish reforms in 1995-97 fail to stop the decline, although the rate of decline decelerates. The financial sector operates at a very low level, several times lower than in many other countries of the region. The fall crisis of 1998 brings more decline to the economy and subjects Ukrainian banks to another painful shock. However, the effects of the crisis are encouraging. The very significant devaluation of the hryvnia helps both foreign trade and the domestic economy. Reform efforts are increased. We observe a gradual hardening of budget constraints on the budget sector itself, as well as on commercial enterprises. Banking rebounds.

Figure 14

Real GDP and loans to GDP ratio, percent, 1993-2000



Source: Harvard/CASE database

Stage 4. ***2000 to present.***[11] Ukraine's economy remains at a very low level. Its GDP per capita, wages, etc. are comparable to the least developed economies. The current level of financial system development, including banking, is also very low. Yet, the economy is growing, and the banking indicators analyzed in this chapter appear to solidly support this growth. Three observations can be made. First, while remaining at a low level, most of the institutional indicators for banking show a significant improvement. The gap between Ukraine and more advanced countries in the region is narrowing. Second, as shown in Figure 14, most of these indicators already began to improve some time ago and preceded, rather than followed, the growth of GDP (household incomes, investment, and foreign trade). Third, while some of the indicators have not improved, there are well-founded expectations that the recent legislative efforts will bring significant improvements in the near future. Some reforms have already been implemented and some are forthcoming - in particular, in the areas of tax reform (including the abolishment of the disastrous *Kartoteka #2* system), land ownership, and bankruptcy procedures, to name a few.

Our final comment concerns an issue addressed at the beginning of this chapter, namely, investment. It can be argued that, despite much attention to institutional development during the last decade,

[11] See "The Economic Situation in Ukraine: 2000" in this volume.

this development is still under-estimated. We keep learning (and admitting) that institutional investment provides very high returns, yet the entire system of official statistics continues servicing physical investment. In other words, economists are still more concerned with physical capital allocations than with institutional efforts. It appears that in Ukraine this substitution – "institutional" for "physical" – has been occurring for several years now, but was not reflected in the standard economic statistics. Our analysis of the banking system seems to confirm the existence of this substitution. In 1996-99 there was increasingly less physical investment, but more institutional investment, although the latter was certainly less visible and less measurable than the former. Reform efforts are now beginning to bring more tangible fruits.

The financial sector is expanding and solidifying. In-depth analysis of this sector provides important insights, not available from the study of standard macroeconomic indicators. Our modest attempt to examine Ukraine's banking system seems to confirm the optimistic evaluations and forecasts. The economy is growing and, if reform efforts continue, better and stronger institutions will further ensure a more rapid development of the financial sector and the entire Ukrainian economy.

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Financial Sector Development as a Central Bank Target in Transition Economies[1]

Ihor Eremenko

Introduction

In this chapter the financial system in transition economies is analyzed, the main impediments preventing the development of this system are considered, and a policy recommendation for central banks in transition economies is formulated. The current targeting of monetary policy tends to be too narrow and results in governments using diverse non-market, or even anti-market measures. It is argued that central banks in transition societies should make the development of the financial system a high priority, or a "parallel target." The analysis here involves the CEE countries, with particular emphasis on Ukraine.

For a decade now, respectable international organizations and internationally reputable economists have been advising governments of transition countries and proposing – and even actively promoting – policies they believed would lead to a faster and less painful transformation. The set of recommended basic reform measures is often referred to as the "Washington Consensus" (Szyrmer, 2000; Dubrovskiy, 2000). In many cases these polices succeeded; in some, they were heavily criticized by insiders of transition countries and by a number of Western economists, for their superficiality and for their attempt to apply the same standard measures, regardless of the circumstances. Stiglitz (1999) wrote, "…at least part of the problem was an excessive reliance on

[1] Research under the supervision of Janusz Szyrmer. Inna Golodniuk and Khwaja Sultan made significant contributions to this chapter.

textbook models of economics. Textbook economics may be fine for teaching students, but not for advising governments trying to establish a new market economy…"

In all CEE countries, the financial sector is in a poor state due to unfavorable initial conditions, bureaucratic "financial repression," inadequate legislation, and inconsistent policies. In many cases, the current responsibilities of a central bank are confined to price stability as the only explicit target of monetary policy. Unfortunately, such a narrow scope of responsibilities does not create an environment conducive to the development of the financial sector. Setting money stability as the only or main target of the central bank is certainly the right thing to do in the case of hyperinflation. There is no evidence, however, that this stability should be the main or only target in an environment of moderate inflation. Moreover, such a narrow targeting enables the authorities to intervene more easily in the financial sector in order to finance budget deficits or to siphon off funds to selected enterprises and individuals. An alternative solution – making financial sector development a top priority, or a parallel policy target – should enable and motivate central banks to consider policy trade-offs, and to be equally concerned about short-term price stability and the long-term development of the financial system, thereby accelerating market reforms and economic growth.

The main motivation behind this idea was the situation in Ukraine. The Ukrainian banking system is one of the weakest in CEE countries.[2] Past policies and international assistance projects have failed to raise financial intermediaries above a rudimentary level. The financial system is not able to provide the necessary services to the economy. In many cases, financial development was neglected in order to meet short-term government priorities or as a result of inappropriate recommendations of Western experts. Many of the latter are not willing to accept the idea of parallel targets because it appears to run counter to existing conventions. Transitional economies, however, experience dramatic changes which are quite unconventional *per se*. Thus, policymakers seeking to promote development in transitional economies must look beyond traditional ideas.

This chapter is organized as follows. In Section 1, the arguments supporting the importance of a well-developed financial system for the economy as a whole are presented, with an emphasis on transitional countries. The current state of the Ukrainian financial sector is described in this context. Section 2 contains a brief overview of traditional central bank targeting. It is argued that current institutional priorities tend to suppress, rather than promote

[2] See "Institutional Development of the Banking System," and "Role of the Central Bank in the Development of Banking" in this volume.

growth. The logic behind promoting development of the financial sector is presented in Section 3. The main points of the chapter are summarized in the last section.

1. Economic growth and the financial system[3]

A well-functioning financial system, by helping to lower transaction and information costs, is indispensable for sustainable economic growth. In advanced economies with well-developed financial intermediaries, the benefits of such a system are often taken for granted. In transition economies, on the other hand, where financial markets are underdeveloped, the role of the financial system in economic growth becomes painfully evident.

Some economists argue that there is no need for active state support for the financial sector. According to Robinson (1952), this sector does not play a special role and automatically adjusts to the needs of the economy. Lucas (1988) argues that economists tend to overestimate the role of finance. Moreover, many development economists – Stern (1989), Chandavarkar (1992) and others – do not appear to appreciate the importance of the financial sector and neglect it in their research.

Nevertheless, many economists agree that the financial sector does play a particularly important role in economic development. Bagehot (1873) and Hicks (1969) argue that the financial system was a crucial factor in England's industrial revolution. According to Schumpeter (1934), banks identify the best enterprises with the most innovative products and thus promote technological improvements. Levine (1997) analyzes existing theories and develops a framework that demonstrates the strong relationship between financial development and economic growth. An analysis of the effectiveness of monetary policy and the financial system in eleven CEE countries demonstrated that economies with better developed financial sectors were growing faster.[4]

The Ukrainian financial sector includes banks, pension funds, trusts, insurance companies, real estate agencies, and other financial intermediaries, most of which are characterized by high costs, inefficiency, poor management, and an inability to resist pressure from the authorities.

Of all financial intermediaries, the banks developed most quickly over the past decade and now dominate all the others: they are the largest intermediaries and provide the most services. At the end of

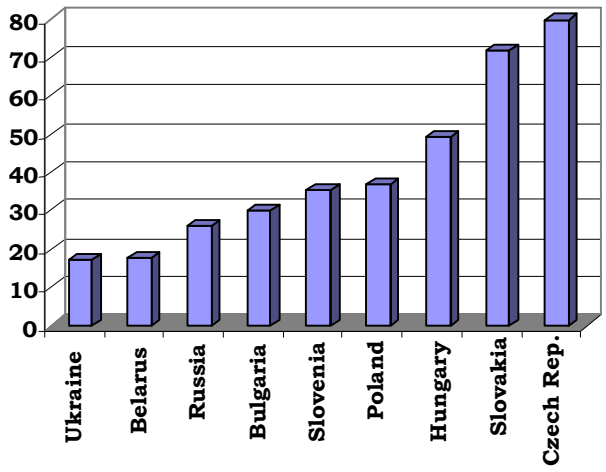
[3] The discussion of economic literature in this section is based on Levine (1997).
[4] Eremenko (2000) applied a policy index based on 15 indicators that reflected the soundness of banks, the depth and structure of the financial system, and the importance of non-bank and offshore funding.

2000, there were in Ukraine 195 registered banks, including 31 banks with foreign capital (7 of them being owned in 100 percent by foreigners), 2 state-owned banks; of these, 153 were considered "operational" and 38 were in the state of liquidation.[5] The entire Ukrainian banking sector is about as large as a medium-sized Western bank.

The volume of total credits provided by the Ukrainian banking system is very low, at 17.2 percent of GDP in 1998 – the lowest among CEE countries (Figure 1). Given that a significant portion of credits in Ukraine is problem ones, the situation becomes even more dramatic.[6]

Figure 1

Depth of financial sector: total credits to GDP, percent, 1998[7]



Source: International Financial (1999)

A no less important issue is the operational efficiency of banks. A low interest-rate spread (difference between average bank credit rate and average bank deposit rate) will be favorable to the economy because it makes money and investment less costly. As Figure 2 demonstrates, the interest-rate spread in Ukraine was the largest among CEE countries, amounting to 34 percent (1999). This large spread can only be partially explained by the high inflation in Ukraine

[5] Harvard/CASE database.

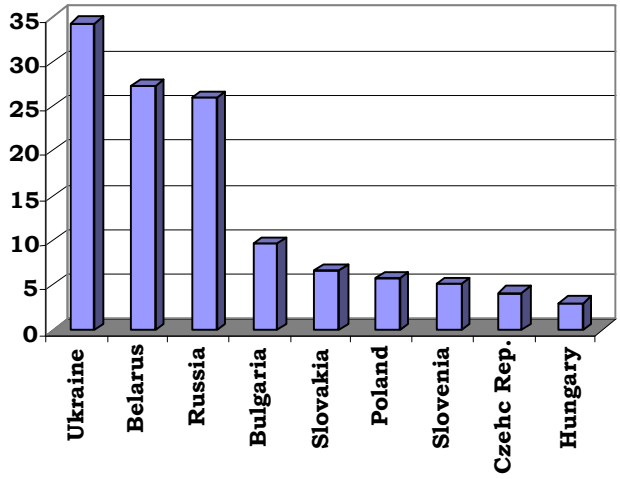
[6] Problem credits comprise overdue, extended and bad credits. At the end of 2000 they amounted to 18 percent of total credits.

[7] Includes all credit to various sectors on a gross basis, with the exception of credit to the central government, which is net (credits to government less government deposits in the banking system). The banking sector includes monetary authorities, deposit money banks, and other banking institutions, such as savings and loan institutions and building and loan associations.

in 1999. Among the countries included in Figure 2, only Ukraine, the Czech Republic, and Bulgaria had their spreads exceeding annual inflation rates (These rates were: 22.7 percent, 2.1 percent, and 0.3 percent, respectively). In fact, these three countries are believed to possess relatively weak banking systems, and during the 1990s, at one moment or another, suffered from severe financial crises.

Figure 2

Interest rate spread,[8] percent, 1999



Source: International Financial (February 2001)

The most important causes of the poor performance of Ukrainian banks are:

1) The poor financial state of households and the non-financial sector
    - the decline in output in 1989-99 – more than 60 percent
    - the decline in bank deposits in 1989-99 – almost 90 percent
    - hyperinflation in the mid-1990s
    - the payments crisis involving barter and arrears
    - the shadow economy – from 50 to 70 percent of GDP
2) Weak management of banks
    - "pocket" banks, created to meet the needs of particular enterprises

[8] Annual interest rate charged by banks on loans to prime customers, minus the annual interest rate paid by commercial banks for demand, time, or saving deposits.

- insider lending
- poor diversification of assets
- lack of knowledge and experience

3) Inadequate legislation
   - weak banking regulations
   - ineffective bankruptcy procedures
   - a low level of contract enforcement
   - inadequate protection of financial transaction confidentiality

4) Excessive government intervention
   - nontransparent "arrangements" and direct influence of the authorities on bank activities
   - credits directed to selected enterprises
   - rent seeking
   - corruption
   - banks being forced to act as agents of the Tax Administration through *Kartoteka* #2[9]

Groups of causes 2, 3, and 4 can significantly be affected by bank activities. The central bank can promote the creation of healthy competition and other incentives to make banks improve their organization. The central bank has also significant power with which it can initiate and implement legislation. And finally, by diminishing its interference in current financial sector activities, the central bank could help solve several other management-related problems. Thus, by adopting and implementing the appropriate policy, it could in many ways promote the development of the financial sector.

To summarize this section:

– A fully developed financial system is crucial for economic growth.

– The degree of financial system development is particularly important in transition economies.

– Ukraine has one of the weakest financial systems among CEE transitional countries.

– A significant part of the Ukrainian banking system's problems could be improved by changing the policies of the central bank.

[9] See "Institutional Development of the Banking System" in this volume.

2. Central bank targeting

The question is: What should monetary policy do and not do? Should the central bank set specific economic outcomes as its targets, e.g., production, employment and trade? Or should it concentrate only on monetary/financial objectives, such as prices, the exchange rate and financial sector performance?

Most economists agree that monetary policy cannot achieve economic outcomes directly, and that setting such targets may even worsen a country's economic performance (Tobin, 1983). The point is that aggregate output is primarily determined by the supply and productivity of labor and capital, which are not under the direct control of the central bank. Moreover, the transmission of monetary policy is uncertain. Shocks from both the demand and supply sides will affect it. The effects of monetary measures could take a few months – or 1-2 years, or even longer – to manifest themselves. Finally, since various economic factors and the actions of other authorities obscure the effects of central bank measures on aggregate output, the central bank itself has both little incentive and little capacity to establish and pursue an output target.

It is not surprising, therefore, that central banks tend to select price stability as the sole objective of their policy. This can be seen from Table 1, which presents central bank objectives in several transition countries.

Table 1

Objectives of central bank policy in selected transition countries

Country	**Legislated prime objectives**
Bulgaria	Currency stability
Czech Republic	Currency stability
Hungary	Internal and external currency stability
Latvia	Price stability, and facilitation of the circulation and allocation of financial assets
Lithuania	Currency stability, and support for government policy
Poland	Price stability and banking sector stability
Russia	Currency stability
Slovenia	Currency stability
Slovak Republic	Currency stability
Ukraine	Currency stability

Sources: Web sites of countries' central banks

A possibly even more powerful factor that influenced the selection of target choices has been the insistence of the IMF, in line with **the Washington Consensus**, to single out monetary stabilization as a top priority. Thus, governments of countries that cooperated with the IMF were strongly advised to set this as the main target of their monetary policy. Such a policy, however, could be costly for an economy, especially for one in transition (Kamin, Turner, and Van'tdack, 1998). Price stability as the sole target of monetary policy reduces economic flexibility without producing important growth benefits (Stiglitz, 1998). Moreover, there is no evidence that this approach helps economic growth (Alesina and Summers, 1993).

In politically unstable countries with a high level of corruption, and particularly in ex-USSR countries, price stability as the sole target of monetary policy provides the authorities with greater freedom to achieve short-term objectives and pursue personal interests. It also enables a government to justify financial repression and to subsidize enterprises favored by particular officials. Moreover, there is no evidence of gains from very low inflation, especially in transition economies. In fact, the opposite seems to be the case. A policy enforcing "artificial" stability, not supported by economic and institutional fundamentals, could result in missed opportunities to pursue other goals, while gaining little from stable prices. After all, in transition economies, price stability is not the main factor in investment decision-making: there are other, much more serious problems related to the tax system, contract enforcement, corruption, etc.

A question naturally arising is, why some countries are unable, or unwilling to develop their financial systems. The existence of inequalities in the initial conditions is not a sufficient explanation. The point is that the authorities in some countries, especially where the political situation is unstable, use the financial sector for their short-term purposes, intervene excessively, and obtain cheap money to finance current needs. As a result, banks are hampered by high reserve requirements, interest rate ceilings, credit controls, foreign exchange market regulations, heavy taxation, and government-directed credits. Governments that apply financially repressive measures justify them by stressing that their financial controls help avert market failures, lower the cost of credit, and improve the quality of loans by excluding risky projects (Denizer, Desai, and Gueorguiev, 1998). Moreover, financially repressive governments may support output and exports in some areas of the economy and encourage the flow of capital to those sectors (Stiglitz, 1989 and 1998).

Most economists agree that financial repression is used to finance a budget deficit where the financial sector is characterized by an oligopolistic market structure, directed credit schemes, the

obligatory holding of government bonds, and suppressed security markets. The weak markets enable the transfer of funds to public borrowers. In addition, the development of a sound and competitive financial sector is not supported in politically unstable countries where policymakers frequently pursue their own financial goals.

The costs of excessive intervention can be demonstrated by examining directed credit schemes in Ukraine. The central and local authorities have the power to influence Ukrainian financial institutions and direct credits to selected enterprises. The government guarantees some loans, and in many cases they are not paid back. In this way, financial intermediaries transfer to loss-making state companies and corrupt officials funds that could have been lent to productive enterprises. Directed credits are considered to be one of the main reasons for the poor structure of assets in Ukraine. According to official statistics, approximately 18 percent of all credits are problem credits (December, 2000).

Excessive government intervention results in low saving account balances, low bank profitability, low resource-allocation efficiency, and low direct investment. Moreover, if the financial sector is repressed, undeveloped and riddled with obstacles, the central bank's monetary policy could be both inefficient and ineffective, producing unpredictable results because the necessary policy transmission mechanism is lacking. All these factors constitute obstacles to growth and lead to losses in the economy.

There is no doubt that high inflation distorts market signals and prevents the economy from developing. Indeed, if there is a threat of high inflation, the government must develop special policies to keep prices from skyrocketing. However, if inflation is not very high, is price stability still so crucial a factor, and if it is, does it make sense to make it the sole target of monetary policy? There is no evidence in support of this hypothesis. Bruno and Easterly (1996) estimated that no significant costs are incurred if inflation is less than 40 percent. Stiglitz (1997) confirms this and argues that only with a very high inflation rate does the economy fall into a high-inflation-low-growth trap. Fischer (1993) and Barro (1997) also state that there is no evidence supporting the assertion that moderately high inflation is costly.

Nonetheless, it should be emphasized that control of inflation, under any circumstances, should remain a very important policy objective. The point is that it should not be the sole target of central bank policy.

A major problem is that too much weight attached to price stability could stimulate efforts to achieve it, not by means of reforms and the strengthening economic fundamentals, but through administrative

measures – price controls, subsidies, etc. As Stiglitz (1998) wrote: "The single-minded focus on inflation may not only distort economic policies – preventing the economy from living up to its full growth and output potentials – but also lead to institutional arrangements that reduce economic flexibility without gaining important growth benefits."

This thesis can be illustrated by the 1998 financial crisis in Ukraine. By 1998, after several years of hyperinflation, Ukraine had achieved relative price stability. Inflation was only 10 percent in 1997, and the exchange rate was stable. This currency stability, however, was achieved mainly through T-bill operations, and not through structural reforms. The government started to issue T-bills in late 1995, which by 1997 became the main method for financing the budget deficit and for maintaining currency stability. Monthly T-bill issues rose constantly, leading to a rapid increase in public debt while nominal and real yields skyrocketed. At the same time, GDP kept declining, the fiscal deficit remained large, and financial intermediaries remained undeveloped. In the second half of 1998, after the Russian financial crisis, the Ukrainian government announced that it was not able to service its debt, which had to be restructured. As the result of the crisis, the economy in general, and the financial system in particular, experienced severe shocks:

- The NBU spent most of its foreign reserves attempting to protect the national currency and repay the debt.
- The hryvnia lost approximately half of its value by the end of the year.
- Government credibility declined further, as was made evident in, among other things, the collapse of the T-bill market.
- The banks had serious problems – in particular, a loss of liquidity, followed by excessive liquidity – and foreign exchange risks became a major issue.
- Bank deposits fell abruptly if expressed in dollar terms (while remained almost stable when expressed in hryvnia terms).

To summarize:

– Current monetary policy and maintaining price stability as the central bank's sole target enables the government to manipulate the financial system and finance the fiscal deficit.

– Directed credits permit corrupt officials to siphon off funds to selected enterprises and to their own pockets.

– There is no evidence that maintaining currency stability fosters economic growth when the inflation rate is less than 40 percent.

– Focusing on currency stability could cause the policymakers to lose the flexibility to pursue other economic goals.

– If the authorities are obliged to achieve currency stability, they could attempt to do so, not through real reforms, but by administrative measures, often at the expense of other sectors, especially the financial sector.

3. The financial system as a central bank target

The central bank can and should promote an environment conducive to the creation of a sound and competitive financial market. Making the development of the financial system a parallel target of monetary policy would help relax the constraints of single-minded price stability targeting. If this target becomes enshrined in legislation, the central bank would then be enabled and obliged to pursue it.

A parallel target should have three important features: (1) it should remain under the direct control of the central bank; (2) its performance should be measurable and subject to systematic monitoring; (3) it should be closely related to the ultimate goal, i.e., to economic growth (Mishkin, 1998).

Undoubtedly, the central bank can influence the financial sector. With economic measures, administrative constraints and legislation, it can either promote or retard the development of the financial system, highlight key directions for development, determine top-priority financial institutions, and so forth.

The second feature of a parallel target – measurability – is somewhat more complicated. Targeting price stability uses a well-defined indicator – the inflation rate, and targeting external stability – the foreign exchange rate. These indicators make it possible to formulate target values, to achieve these values by means of diverse monetary policy measures, and to monitor them using statistical data. Unlike currency stability, no single figure permits one to trace the development of the financial system. To get an effective indicator for this purpose, several factors must be considered.

The last criterion – the relationship between the parallel target and economic growth – was illustrated in Section 2. Basing our argument on both theory and empirical research, we showed that a sound financial sector is critical for the development of the whole economy.

There is yet another important issue concerning the measures the central bank should implement to achieve its targets. The development of the financial sector as an objective of central bank policy means neither a return to the old command system and central planning, nor the micro-managing of financial intermediaries. To the contrary, what is needed here is the creation of a competitive

environment, the removal of excessive restrictions, and the drawing of regulations that promote a sound financial system.

Finally, one more issue should be addressed. A traditionally-minded economist views targeting the development of the financial system, as a departure from "conventional" economics. Making this development an object of central bank policy is not like inflation or exchange-rate targeting, or keeping interest rates under control. Yet, one should be reminded of an important historical event: the creation of the Federal Reserve System of the United States in 1913, to promote financial stability in response to the frequent and lengthy bank panics which had occurred throughout the 19th and early 20th centuries. The financial crisis of 1907 was so severe that it convinced the American public of the need to establish an institution for developing and supporting a sound financial system (Mishkin, 1998). In time, the Federal Reserve Bank helped create an orderly financial sector and the need for explicit direct measures for promoting financial development diminished. As a result, a short and medium-term measure – like changing the interest rate – becomes usually sufficient to keep financial intermediaries in good shape.

The point is that the financial systems of Ukraine and a number of other transition countries resemble that of the United States at the beginning of the century. In Ukraine, the establishment of a sound financial system is a difficult task which cannot be accomplished by the financial sector alone, but which requires central bank support. An important aspect of this shift in policy priorities would be to start paying more attention to long-term objectives – like financial sector development – and less to short-term objective – like currency and price-level management.

To summarize this section:

– To promote sound financial intermediaries and foster economic growth, the central bank must adopt the development of the financial sector as a parallel target.
– While this target meets the formal criteria of a central bank objective, further research in this area is neccessary.
– The development of the financial sector is not such an unconventional target as it might seem: the Federal Reserve System of the US was created for similar purposes.
– Adopting the development of the financial system as a parallel target would effectively change the priorities of the central bank: it would have to pay attention not only to short-term needs but also to the long-term growth of financial intermediaries.

Conclusions

This chapter has dealt with the development of the financial sector in a transition economy, the role of this sector in economic growth, and the policies of a central bank that significantly influence the development of the financial market and the entire economy in general.

Sound financial intermediaries are crucial for economic development, especially in transition countries with rudimentary banking, equity market, insurance, and pension fund systems. In this chapter we focused on one such country, Ukraine, which has one of the weakest financial systems in CEE.

An efficient central bank policy should concentrate on the most important problems of the monetary sector, and in transition countries, on promoting the development of the financial markets. Present monetary policy, which sets currency stability as the main target, cannot promote development because it is too narrow, allows authorities to implement non-market measures, and leads to the suppression, and sometimes oppression, of the financial sector, thereby retarding economic growth. We therefore propose that the central bank be further empowered by permitting it to adopt and implement a broader monetary policy that favors the financial sector and which truly facilitates long-term economic growth. This broader monetary policy can be achieved by adopting the development of the financial system as a parallel target of the central bank.

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Role of the Central Bank in the Development of Banking[1]

Inna Golodniuk

Introduction

Many central banks all over the world, in addition to conducting monetary policy, play an important role in elaborating and implementing regulations governing financial markets and economic actors. The central banks in many countries, including Ukraine, also oversee their respective banking systems. Prudential supervision and efficient regulation is very important for the development and growth of the banking system, and as a result, for economic growth in general.

The question that may arise is: Why should the government intervene at all? The standard explanation or justification for government regulation is the so-called market failure: if left to itself, the market might not be able to operate efficiently, so the government must help out. A typical problem of the financial market is its poor performance in dealing with **asymmetric information** inherent in all financial transactions, in which the transacting parties lack accurate information about one another for making the right decisions. For example, bank managers always have better information about the quality of the credit portfolio than bank creditors and depositors.

Asymmetric information is inevitable in every transaction, be it the purchase of a computer or getting a haircut. Services are usually associated with higher information asymmetries than goods.

[1] Research under supervision of Janusz Szyrmer. The author acknowledges the contributions of Volodymyr Domrachev and Anatoliy Drobiazko to this chapter.

Moreover, services requiring highly specialized and sophisticated skills and expertise, like healthcare or financial intermediation, probably have the highest level of asymmetric information. For this reason, the services market often fails to produce desirable outcomes – like the efficient channeling of financial resources, in the case of financial transactions – and is believed to require more regulation than other product markets.

Many economists have also argued that strong financial infrastructure is a necessary prerequisite for economic development in general (Levine, 1997). Thus, an efficient financial system is beneficial to all market participants and thereby generates an important externality, or public good. This is another rationale why authorities should put effort into facilitating and prompting the development of the financial sector, and in particular, the development of the banking system,[2] which is the largest financial intermediary in transition economies. Regulation is the main tool through which a central bank in a non-command economy can influence the process of financial sector development.

The banking system is regulated primarily to promote the provision of accurate and complete information to clients and to ensure the soundness of banks as financial intermediaries. These objectives are achieved by setting the "rules of the game" that are meant to reduce asymmetric information – in particular, adverse selection and moral hazard.

Adverse selection occurs before the transaction takes place. For example, banks that are big risk-takers will be the ones that most actively seek deposits. If they are fortunate enough to succeed in their risky investments, the rewards will be high. However, depositors wishing to protect their savings might not be interested in being exposed to high risks. Thus, in order to prevent excessively risky investments, relevant information asymmetry must be reduced by securing for depositors and creditors access to information on a bank's portfolio and risk management.

Moral hazard often arises after the transaction has occurred. For instance, after receiving the deposit, bank managers might engage in excessively risky activities, which they would avoid if managing their own assets. This type of behavior might not find favor with bank clients. Thus, creditors should be provided with the capacity to exercise their right to monitor how banks manage their deposits.

Availability of information to depositors and forcing the banks to efficiently use attracted funds is favorable to many economic actors. On a microeconomic level, this ensures the allocation of capital to the most viable and competitive banks that are able to provide an

[2] For further discussion see "Financial Sector Development as a Central Bank Target in Transition Economies" in this volume.

adequate rate of return to their depositors, which in turn stimulates the latter to save rather than to spend on current consumption. On a macroeconomic level, this secures the inflow into the economy of investment funds that are allocated efficiently by the financial system.

Governments should therefore support the implementation of regulations that promote the development and growth of competitive and efficient banks and which protect depositors, directly and indirectly, from the misuse of their savings by the banks. In Ukraine the regulation and supervision of the banking system is the responsibility of the National Bank of Ukraine. Since the Ukrainian financial market is still underdeveloped, the NBU should put substantial effort into supporting it, and especially into supporting the banking system, which, so far, is the most important financial institution in the domestic economy. In other words, while setting the regulatory framework and pursuing monetary policy, the NBU should take into account the impact of this activity on the development of the banking system and include the development of this system among its highest priorities.

In this chapter I consider the major problems faced by the central bank in a transition country while it is developing an adequate regulatory framework. I then discuss the regulatory activities of the NBU in the context of institutions prevailing in the Ukrainian economy, and examine the major problems and possible ways of approaching them.

1. Regulation of Ukrainian banking

As discussed above, the financial sector, and the banking system in particular, should be appropriately regulated to prevent a potential market failure resulting from large information asymmetries. Developed countries have accumulated solid experience in reducing asymmetric information through the regulating of their banks. This experience provided the basis of the principles adopted for effective bank supervision by the Bank for International Settlements in Basel.

The formulation of satisfactory banking regulation for transition economies is a far more challenging task than it is for developed countries. The former often have incomplete markets and lack market institutions in many areas relevant to the operations of commercial banks – weak stock and real estate markets, poorly defined and enforced property rights, low transparency and availability of information, absence of uniform and consistent accounting standards, lack of credit histories, etc. Thus, central banks in transition economies have to struggle with complex fundamental problems that manifest themselves much more sharply in Ukraine than in the other countries of the region.

Absence of uniform and transparent accounting principles. Ukraine's accounting standards are slowly evolving towards international standards. Since January 1, 1998 banks have been required to report according to International Accounting Standards (IAS). To accommodate this requirement and to enable monitoring the implementation of bank regulations, the NBU introduced a new chart of accounts that seemed to be broadly consistent with IAS. The major drawbacks, however, were: lack of complete and internally consistent reporting between bank branches, low capacity for the verification of journal entries (e.g., for detecting possible fraud in credit and securities transactions, and in the registering of collateral and guarantees), and weak internal control. Another drawback was the pervasive notion that the reporting of information is for the use of regulators and not for internal management purposes.

Poorly defined and enforced property rights. The Ukrainian government has yet to develop the legal framework for regulating property rights, especially corporate property rights, and an appropriate mechanism that allows shareholders to exercise their rights over corporate managers. It is also very difficult, and almost impossible, for outsiders to obtain information about the owners of an enterprise because there is no single registry of corporate ownership. Thus, an important part of the regulation of commercial banks is ineffective. For example, the NBU sets requirement regarding the maximum size of credits to bank insiders. However, if information on corporate ownership is not available, then it becomes impossible to determine the identity of insiders. By the same token, a barely operational system of bankruptcy procedures hampers the development of the domestic banking system because banks are unable to properly protect themselves against defaults.

Absence of credit history. Ukraine lacks a mechanism for monitoring credit histories as in developed economies. The NBU should assist in the development of an institution that would collect, organize, and maintain information on a wide range of borrowers. Together with strict disclosure requirements, such an institution would further reduce information asymmetries, which would make it possible to lower interest rates on loans, thereby generating a larger inflow of investments into the economy.

Inefficient mortgage mechanism. The mortgage mechanism in Ukraine does not function as efficiently as in developed market economies because of the incomplete and fragmented real estate, land and stock markets. Land reform began only two years ago and property rights in land are only partially regulated. Banks cannot

accept land as collateral for loans. Moreover, the domestic real estate market is weak and fragmented. Banks bear high costs in realizing their collateral, which indicates lower efficiency from the economic standpoint.

Low trust in banks. The Ukrainian banking system suffers from a low level of public confidence. The credibility of domestic banks was greatly undermined by their failure to protect depositors from the rapid devaluation that followed the Russian financial crisis in 1998. As a result of this devaluation, hryvnia-denominated deposits lost one half of their original value. This precipitated a large outflow of household savings from the domestic economy.

At present, the situation has improved to a good extent: the deposits of households in the domestic banks increased in 2000 by almost 70 percent. Inflation for the same period was 25-30 percent, and the dollar exchange rate remained relatively stable. This improvement was most likely related to better risk management on the part of banks and to the introduction of several packages that peg deposit value to, for example, a corresponding dollar amount.

The situation, however, has been exacerbated by the practices of the tax administration that can – without the authorization of a court or public prosecutor – demand that a commercial bank disclose information regarding any contract or depositor. This fact, and the general imbalance between the rights of the taxpayer and tax inspector, leads many would-be bank depositors to avoid the banking system altogether, even if their savings are completely legal.

Weak management. In Ukraine, most bankers are from the Soviet *Gosbank* period. Placed in a new and rapidly changing environment, these bankers are unable to monitor and manage diversified portfolios and complex bank transactions. Likewise, the boards of these banks do not practice good standards of internal oversight and are incapable of doing proper internal audits. With these limitations, it is difficult for Ukrainian banks to implement the regulations imposed by the central bank.

Absence of bank performance ratings/rankings. While most agencies rate the quality of Ukrainian government bonds and other securities, as well as the overall quality of the country's debt, most major international rating agencies – like Moody's, Standard & Poor's, and Thomson BankWatch – only become active on the Ukrainian market in 1997. In fact, the first rating of a Ukrainian commercial bank did not take place until 2000 when Thomson BankWatch rated the performance of Nadra Bank.

Weak infrastructure. There was some progress in Ukraine in the privatization and modernization of the telecommunications market. Cellular and Internet communications are becoming increasingly available and banks are gradually introducing new services like Internet banking and banking by cellular phone, which could significantly reduce transaction costs should such services be provided on a large-scale basis. The latter will depend on further progress in telecommunications development. However, while Ukraine develops its cellular communications, the major telecommunications monopoly, "Ukrtelecom," is totally state-owned and a competitive market in this area cannot be expected in the near future.

2. Banking regulation in Ukraine: standard approaches and recommendations

To stimulate the development of the Ukrainian banking system, the NBU must develop and implement "standard" regulations similar to those in developed economies. It must address the transition-specific problems identified above, or at least assist other government agencies in doing so. Some of these problems – for example, poorly defined and enforced property rights – do not lie within the area of central bank authority, while others – like credit history – could and should be dealt with by the central bank.

In market economies, the authorities should keep their direct involvement in business activities to a minimum, and intervene only indirectly by determining and enforcing the rules of the game. Similarly, central banks set regulatory requirements and control the implementation thereof through prudential supervision. All banking regulations usually cover six areas: the government safety net; restrictions on bank asset holdings and capital requirements; prudential supervision; disclosure requirements; consumer protection; and competition (Mishkin, 1997). By regulating these areas the NBU could reduce asymmetric information associated with banking transactions and address the problems listed above.

The ***government safety net*** aims at reducing the adverse consequences of a bank failure that occur when a bank is unable to meet its payment obligations to depositors and other creditors, and goes out of business. In order to receive their deposits, bank customers must wait until the bank is liquidated, at which time they could be paid only a fraction of the value of their deposits. Because banks operate on a "first-come-first-served" basis, a bank "run" often occurs. Uncertainty and lack of information can lead to runs on both good and bad banks alike, and the failure of one bank can precipitate the failure of others and spark an outflow of money from the banking system.

Thus, governments often provide a safety net to reduce the possibility of bank panic. One form of protection is deposit insurance. In the US, for example, the Federal Deposit Insurance Corporation (FDIC) guarantees that depositors will be paid in full on the first USD 100,000 deposited in a bank, regardless of what happens to the bank. Although economists agree that this insurance can increase the "moral hazard" for depositors – they have less incentive to monitor their banks – many countries continue to provide a government safety net.

The safety net in Ukraine operates on a principle similar to that used in the U.S. In 1998 the President issued a decree pursuant to which a fund for insuring the bank deposits of individuals was established in February 1999. This fund is financed by the Government and commercial banks. Of the 164 banks operating in Ukraine, 133 contributed to the fund, which accumulated UAH 65 million (about USD 12 million) by mid-2000. The fund guarantees compensation for the loss of private deposits with banks. The maximum compensation, however, was set at UAH 500 per depositor, regardless of the amount lost.

This provision is not very useful, however; in fact, a true safety net has yet to be created. First of all, paying back a small amount of money fails to reduce the possibilities of a bank run. Second, this compensation does not decrease the risks associated with depositing savings in a bank. Third, this "safety" – while bringing no explicit benefit – does involve additional costs: it keeps USD 12 million idle. Given the small size of the Ukrainian banking system, this is not a small amount of money and could have been used for other purposes. More important, it increases the banking system's transaction costs, namely, additional compliance costs for the commercial banks, and monitoring costs for the NBU.

The recent example of Slov'yansky Bank's collapse, which was the first time the fund had to compensate depositors, proves this point. The fund allocated UAH 4 million – sufficient to compensate for about 6 percent of deposits (principal only) at Slov'yansky.

The NBU should fully use its authority, strengthened by the recently adopted Law on Banks and Banking,[3] to handle the rehabilitation and/or liquidation of insolvent banks. Moreover, it should either abandon the existing system all together or develop a more credible mechanism for deposit insurance. The latter should substantially increase the security for money deposited in banks,

[3] The Law was adopted in December 2000, and governs the structure of the banking system, economic, legal, and institutional bases for banks' functioning, including establishing, management, reorganization and liquidation of a bank.

thereby contributing to the strengthening of confidence in domestic banks on the part of businesses, and stimulating an inflow of savings into the banking system.

Restrictions on bank asset holdings and capital requirements are often used by governments to minimize moral hazard. Regulations that restrict banks from holding risky assets, such as certain common stocks, are a direct means of making banks avoid excessive risks. Bank regulations also promote diversification, which reduces risk by limiting the amount of loans in particular categories or to individual borrowers.

The requirement that banks have sufficient capital provides them with another incentive to assume fewer risks. When a bank is forced to hold a large amount of equity capital, it has more to lose if it fails and is thus more likely to pursue less risky activities. Bank capital requirements can take three forms. The first type requires banks to maintain a certain leverage ratio, that is, the amount of capital divided by the bank's total assets. While calculating leverage ratio, assets are usually weighted according to their relative risk. The second type of risk-based capital requirement sets minimum capital standards linked to off-balance-sheet activities, like interest-rate swaps and trading positions in futures and options. The third type can be illustrated by the example of the US Federal Reserve's approach to covering risk in the trading activities of the largest banks: the latter are required to estimate their possible losses over a ten-day period, and to set aside additional capital equal to three times that amount.

Restricting asset holdings and capital requirements is employed by the NBU according to the patterns described above. The NBU sets standards – for the capital requirement, maximum degree of risk per credit, etc. – which the banks must maintain. Most of these requirements were developed under various foreign technical assistance programs related to bank supervision (Landy, 1997) and are broadly consistent with the recommendations of the Bank for International Settlements.[4] In addition, the NBU sets the rate of required bank reserves and in such a way affects bank assets' allocation. The reserves are established as an additional safety, in a case a bank experiences liquidity difficulties.

Thus, the NBU should work to enforce its requirements by closely monitoring banks and taking appropriate measures against non-compliance. The principle it has yet to learn, however, is equal

[4] These recommendations were introduced in 1998 and have been updated several times since; for example, capital charges for market risks were added to those for credit risks. The latest revision has been sent out for final consultation, and is due to come in force in 2004.

treatment for all banks with the same problem. Selectivity, or preferential treatment, in the long run works to the disadvantage of the "favorites" themselves, as illustrated by the example of Ukrayina Bank.[5] The rewards of such efforts should be quite significant as they could enhance trust on the part of bank customers in both banks and bank management.

Prudential supervision, i.e., overseeing who operates banks and how they are operated, is also an effective method for reducing adverse selection and moral hazard on the part of banks. On-site examination gives regulators the opportunity to monitor how banks implement minimum capital requirements and their restrictions on asset holdings. Banks are usually given a CAMEL ranking. (The acronym is based on the five areas assessed: capital adequacy, asset quality, management, earnings, and liquidity.) If a bank receives a low ranking in any of the five areas, then the central bank can take disciplinary action. However, the most recent trend in bank supervision is to put greater emphasis on evaluating the soundness of bank management with regard to controlling risks, rather than on assessing a bank's position at a certain point in time.

Since late 1996 the NBU has had a more systematic schedule of inspections and has been using methods borrowed from the U.S. system, but significantly adapted to reflect the circumstances under which domestic banks operate.

In 1998, for example, an attempt was made to introduce the CAMEL ranking system, with the expectation that ranking would take place regularly and the results published. The system was also supposed to function similarly to how it does in the U.S., helping to evaluate and quantify (i.e., assign ranking) a bank's compliance with prudential requirements and legislation in general. In particular, this would have included a bank's standing with respect to capital adequacy, quality and structure of assets, and evaluation of skills for risk management. However, the NBU's efforts were not effective and CAMEL ranking – even if functioning – was not very helpful because the results were not publicly available.

As world experience illustrates, the availability of reliable and timely independent opinion about the performance of a bank is vital for developing investor trust and a willingness to do business with it. For this reason, many agencies exist for the purposes of providing information regarding their evaluation and analysis of the performance of various financial institutions. There is currently an

[5] During the past few years Ukrayina Bank financed different government programs like crediting of the domestic agriculture, which operated with losses. As a result the bank became insolvent – as of January 1, 2001, about 70 percent of the bank's credit portfolio were problem loans.

acute need for this type of information service in Ukraine and the NBU should be promoting its development. The information, if publicly available and disseminated on a regular basis, would:

- provide individual and institutional investors with relevant information on the creditworthiness of a commercial bank, thus facilitating the inflow of savings into the economy and the development of the banking system;
- strengthen the capitalization of commercial banks through modern market mechanisms, particularly through open and transparent initial public offerings; and
- stimulate better risk management in banks.

In developed economies, ***disclosure requirements***, which enable the market to assess the quality of a bank's portfolio and its risk exposure, is one of the major instruments ensuring that a bank acts in the best interest of its depositors. Regulators require banks to adhere to certain standard accounting principles and to disclose a wide range of information to the public. This information enables shareholders, depositors, and creditors to monitor banks and thereby acts as a deterrent to excessive risk taking. The NBU should therefore study the experience in other countries in order to take full advantage of disclosure requirements.

Ukrainian banks are currently required to publish balance sheets and income statements quarterly, and the same together with other financial statements annually. According to the Law on Banks and Banking, this information is to be published in either *Uriadoviy Kur'yer* [The Government Messenger] or *Holos Ukrayiny* [The Voice of Ukraine], both of which are not very easily available. For example, Uriadoviy Kur'yer has a circulation of 115,000 or approximately one copy per 500 people. Before the law was adopted, banks published their financial statements in *Visnyk NBU* [The Herald of the NBU], which is even more scarce than the above mentioned periodicals.

In addition to the difficulties in finding this information, the potential bank client faces another serious problem: the published reports are so aggregated that they are of little value in making decisions. For instance, banks present "total amount of loans issued," but information regarding the status of these loans – for example, the share of bad debts – is absent.

The NBU could contribute significantly to the development of the banking system by expanding and strictly enforcing disclosure requirements. The first and most obvious step would be to require banks to supply comprehensive quarterly financial statements providing, among other things, information on the status of bank

assets, their lending activities, interest rates, and profits/losses. These statements should be audited by the NBU at least semiannually and made public by at least posting them in all bank branches.

Consumer protection is enhanced by providing important information to bank customers, like information on the cost of borrowing, including standardized interest rates; on how finance charges are determined; on the handling of billing complaints; and on non-discrimination in credit markets, etc. The current Law of Ukraine on Banks and Banking specifies the type of information that clients have the right to obtain from a bank:

- data on financial indicators and activities which must be made public
- list of the bank's managers and the managers of its branches
- list of legal entities and individuals who own more than 10 percent of the bank's equity capital and
- list of the services provided by the bank and their prices

However, these provisions alone do not reflect the philosophy of consumer protection as it is understood in Western economies. So-called truth in lending implies, first of all, that the consumer has the right to know about benchmark interest rates and the range of interest rates charged by other banks.

The other important component missed is the procedure for handling customer complaints, which is quite typical of the prevailing declarative nature of Ukrainian regulations, including those governing banking. It is often declared, for example, that a bank, its manager, or the client must adhere to certain rules; however, the enforcement and remedial mechanisms are not specified. This means that, if a violation of the rules occurs, the nature of the response is totally at the discretion of the bureaucrat or manager who will handle it. This contributes to the system's nontransparency and provides opportunities for abuse of power.

The NBU should therefore take measures to ensure that the recently adopted Law on Banks and Banking is made operational, especially those parts dealing with the management of banks, requirements regarding bank activities, customer relations, and confidentiality of customer and banking-transaction information.

Restricting ***competition*** through appropriate regulation is practiced by some governments to help protect bank profits. However, in recent years most industrialized countries have abandoned such practices because of their serious disadvantages. Fortunately, the NBU does not have any regulations that restrict competition.

Ukraine is now in the process of giving its banking system an effective and efficient regulatory and supervisory capacity. Several positive results have been achieved to date, in particular, the adoption of the Law on Banks and Banking and the Law on the National Bank of Ukraine.[6] Moreover, the NBU was successful in introducing regulations that bring its prudential norms closer to international standards, which make financial information more meaningful and reliable and improve the organizational structure of bank supervision. Nevertheless, as discussed above, there is still much room for improvements that would accelerate the development of the Ukrainian banking system.

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[6] The law regulates structure, functions, and authorities of the NBU, approved by the Parliament in May 1999.

Cyclical Dynamics of the Demonetized Sector

Ihor Zhylayev

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> "Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia's or Egypt's? If so, what, exactly? If not, what is it about the 'nature of India' that makes it so? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard not to think about them, it is hard to think about anything else."
>
> *Robert E. Lucas* (Mankiw, 2000, p. 104)

Introduction

Studies of the Ukrainian transition to a market economy frequently present changes as chaotic and random. Kolodko (2000), for example, claims that one of the main driving forces of the economic downturn of the 1990s was the accumulation of mistakes made in economic reform strategy that were precipitated, to some extent, by inaccurate forecasts of the country's economic development. Sundakov (1998) and Nanivska (1999) stress the political causes of slow reforms and blame the government for lack of foresight in reform conduct. Kornai (2000) emphasizes the fragility and idiosyncrasies of transition: after old institutions and structures are dismantled, new ones are formed by trial and error, and the length of this process varies significantly, depending on the depth of transformation.

The main message of Ukrainian transition studies is that it is difficult to determine the general pattern of this process. As chaotic as it might appear, there is, nevertheless, a kind of order in the process. In particular, important regularly occurring phenomena can be detected; however, they only become visible when one thoroughly analyzes the dynamics of a transition economy.

In Ukraine, the most interesting regularly occurring phenomena, in our view, are those in the demonetized sector. Revealing these phenomena is a prerequisite for reliable forecasts and policymaking. Yet, in spite of the considerable number of publications on non-monetary transactions and the payment crises, there is still an insufficient amount of research in this area. Continuous statistical updates and revisions, together with theoretical and methodological advances, have rendered the earlier studies dated and incomplete in their coverage. Moreover, as soon as Ukraine's economy stabilizes, the diverse methods of standard economics, which were not useful just a few years ago, will become applicable.

Recently, the idea of a **durable transition** has become increasingly popular. Economics has witnessed the emergence of new conceptual developments, such as transition economics, economic reform theory, and institutional trap theory.[2] These new theories have made us realize that it is impossible to switch to a new, more desirable and efficient economic regime in a single "leap." Consequently, the period required for interim reforms turns out to be much longer than originally anticipated.

Accelerated development of a complex system of non-monetary transactions has been a distinctive feature of Ukraine's economy in recent years. A system based on non-monetary means of payment distorts economic relations, increases transaction costs, creates additional market barriers, and dramatically changes the incentives and behavior of economic agents, thereby hindering economic growth.

1. Subjective and objective factors

Many political leaders and mass media commentators believed that non-monetary transactions in the Ukrainian economy would disappear as soon as economic growth was revived by market reforms and stabilization. The avoidance of taxes was seen as the primary reason behind these transactions. Hence, the simple panacea was to increase pressure on those attempting to evade taxes.

[2] According to the trap theory, new inefficient stable institutions, or "the institutional traps," emerge during times of transition. Barter, nonpayment, corruption, and tax evasion are examples of these institutions (Polterovich, 2001).

The "subjective" nature of non-monetary transactions tended to be emphasized, while certain "objective" (systemic or institutional) regularities of the demonetized sector were generally ignored. The pervasiveness of these transactions was interpreted to be the predominant social and mental legacy of the socialist era: "Social physiology views contemporary barter as past experience, rooted in the mentality of the administrators" (Kulytsky, 1999, p. 5). The phenomenon of demonetization was personified in the stereotype of the corrupt director. Directors who sought to avoid paying taxes were viewed as the principle obstacle to economic development. The main emphasis was on their "immoral activities."

These subjective factors, however, cannot provide a full explanation for the phenomenon of demonetization. To be able to understand what has happened, it also becomes necessary to examine the objective causes of the current economic situation and to analyze the distinctive regularities of non-monetary transactions.

We will begin this analysis by looking at the subjective factors, and this will be followed by a discussion about the objective factors.

Various features of economic development in transition countries are often explained by referring to the "wicked" behavior of individuals involved in sinister interactions between business, mafia, and government. The most popular concepts include: rent seeking (Aslund, 1996); the virtual economy (Gaddy and Ickes, 1998); and the economy of individuals (Kleiner, 1999; and Levine, 2000).

Rent seeking. The rent-seeking hypothesis is frequently used to explain the failures of post-socialist economies (Aslund, 1996; Tollinson, 1997; and Zaostrovtsev, 2000). Rent in this case is "a payment to a factor in excess of what is necessary to keep it to its present employment." Rent seeking is "the use of real resources in an attempt to appropriate a surplus in the form of rent. … Consumers suffer two losses from rent seeking: the loss of consumers' surplus from the higher price and the loss of output from the resources devoted to rent seeking" (Pearce, 1997, pp. 121 and 372-373). Rent-seeking behavior may take various forms:

- (political) pressure
- bribery and lobbying
- the misuse of resources by influencing the behavior of politicians (through voting, campaign contributions, etc.)

Non-productivity is a distinctive feature of rent seeking. Instead of producing useful output, economic agents – in order to extract additional profits (rent) – devote their time, efforts, and resources to redistributing already-created products. As a result, society incurs

losses instead of deriving gains from an alternative (productive) use of the resources. Thus, rent seeking could be defined as value redistribution without creating any new utility for society. The resources allocated to rent seeking by corporations were estimated at 13 percent of GDP for the U.S. in 1963-66 (Tollinson, 1997), and at 7 percent of GDP for the U.K. in 1968-69. The losses due to rent seeking in Russia were estimated at 80 percent of GDP in 1992 (Aslund, 1996). This figure accounts for the differences between world and domestic prices for raw materials, for import subsidies and for diverse credits and fees to racketeers.

Economy of individuals. Kleiner (1996, 1999) argues that in post-Soviet Russia the main economic actors are not legal entities – enterprises and other organizations of all ownership forms (including administrative bodies) – but individuals. The following features characterize this economy:

- a wide gap between the personal interests of managers and what is best for their enterprises in terms of realizing market potential
- very large and growing differences between the remuneration to enterprise managers and that paid to other employees
- priority given to the short-term interests of economic agents (related to the instability of the institutional environment)
- weak market competition
- corruption and criminal market relations
- resort to non-judicial means of conflict resolution
- low factor productivity

Virtual economy. Gaddy and Ickes (1998) claim that the reforms in Russia resulted in a "virtual economy" in which – unlike in a market system – rules of behavior and the criteria for success and failure create an illusion, systematically distorting the economic indicators of the true situation. This illusion allows the government to inflate the actual number of administrative staff and to make excessive expenditure claims on the budget. For this reason, Russia has not been able to overcome its fiscal crises and pervasive nonpayment problems. Gaddy and Ickes reject a widespread belief that, in a transition economy, "innocent" enterprises are forced to become inefficient and insolvent: to the contrary, enterprises are active participants in transition, and not its passive victims. Together with the government and other agents, enterprises support the virtual economy which itself matures into a well-established system.

The arguments described above provide only partial explanations to the observed phenomena. In order to understand exactly what has occurred, it is necessary to analyze both the short-term and

medium-term dynamics of the main parameters of transitional economies. Ukraine is a good case for this analysis. The slow pace of reforms has caused Ukraine's economy to operate without any drastic changes in the main trends of basic parameters. This relative stability, especially during the last several years, enables a systematic analysis of the features of an economy adrift – one which remains under a kind of long-lasting ("sleepy") crisis.

2. Economic indicators for Ukraine's demonetized sector

All transactions in a country's economy can be classified into two broad categories: monetary and non-monetary. In **monetary transactions**, money (national currency) is used as a means of payment. **Non-monetary transactions** involve a variety of money "substitutes" (Zhylayev, 2000a), including:

- arrears
- barter
- mutual settlements (primarily, tax settlements)
- promissory bank notes and treasury securities
- corporate, firm, and municipal promissory notes (widely used as money substitutes in debt-clearing operations)
- other money substitutes

For the needs of this study, we divide the economy into two sectors: the **monetized sector** and the **demonetized sector**. The latter includes all economic activities involving non-monetary transactions.

Arrears are pervasive in the demonetized sector, occurring in both payables and receivables. **Payables** (or accounts payable) are payments due to all suppliers of goods and services purchased by an entity (an enterprise or another organization). **Receivables** (or accounts receivable) are payments due to the entity for all products it has sold to its clients. **Arrears**, i.e., overdue payables and overdue receivables, occur when the payments are not made by a certain date.[3] They may arise for the following (Pinto, Drebentsov, and Morozov, 1999):

- payments among domestic enterprises
- liabilities to banks

[2] In the literature, arrears are often defined broadly as total payables or total receivables, including both non-overdue and overdue financial obligations. A narrow definition of arrears is used here: they are understood as overdue obligations only. In Ukraine, these arrears, (overdue payables, domestic and foreign combined) amounted 67 percent of GDP on January 1, 2001. This ratio was 93 percent in January 2000, 86 percent in January 1999, and 82 percent in January 1998 (source: Statistical Bulletin).

- wages
- taxes and other payments owing to the budget and to extra-budgetary funds
- government liabilities, including wages for budget sphere employees, pensions and various social transfers
- liabilities to foreign governments, enterprises, and individuals

Gross arrears are the total arrears of all entities. Given that the amount owed by one entity (its overdue payables) equals the amount claimed by another (its overdue receivables), logically, total domestic arrears payable should equal total domestic arrears receivable.

The **net arrears** of an economic unit (enterprise, industry, sector, city, region, etc.) represent the difference between its overdue payables and overdue receivables. Typically, an economic unit's payables do not equal its receivables; the higher the level of aggregation, the lower the difference. For example, net arrears calculated at the level of the enterprise must be greater than, or at least equal to the net arrears of the entire industry.

In a similar way, one defines **gross payables** and **gross receivables**, as well as **net payables** and **net receivables**. These include both current and overdue financial obligations of enterprises.

An analysis of the payment crisis problem demonstrates two principal regularly occurring phenomena:

1. As soon as mutual arrears emerge somewhere in the economy, they tend to grow rapidly - like an epidemic - propagating themselves through the chain of receivable-payable obligations (Pinto, Drebentsov, and Morozov, 1999).
2. In Ukraine, the total of accounts payable has consistently been greater than total accounts receivable.

The second phenomenon above can be explained by, among other things, the following factors. First, payables are calculated in sales prices, whereas receivables are calculated in operational costs (the difference between payables and receivables is the profit). Second, payables include such items as enterprise arrears to the budget and social funds, and wage arrears; these items are absent in receivables. Third, accumulating receivables takes longer than payables. Due to price inflation, enterprises most often sell their products for much higher prices than what they actually paid for the inputs (raw materials, labor, etc.) used to produce these products. Inflation causes a faster growth of accounts payable than of accounts receivable. Moreover, since current inflation raises expectations for further inflation, enterprises, in anticipation of future inflation, tend to set their product prices at levels much higher than those justified by the actual cost of inputs.

Data on selected kinds of non-monetary transactions in Ukraine during the last four years are presented in Table 1. The size of the overall demonetized sector can be measured by the ratio of non-monetary transactions to total sales in the economy during a one-year period. For several years, the demonetized sector in Ukraine has been very large:[3] in 1997, non-monetary payments were 55 percent of total sales; in 1998, this ratio increased to 58 percent; in 1999, it decreased to 51 percent; and in 2000 it further decreased to 29 percent (source: Statistical Bulletin).[4]

Table 1

Non-monetary transactions in Ukraine, 1997-2000*

	1997	1998	1999	2000
Share of barter in total sales, percent				
- industry	42.4	42.5	32.7	17.1
- agriculture	23.4	26.2	27.1	18.6
- exports	10.5	7.5	3.8	1.5
- imports	10.0	7.1	3.0	1.4
Share of non-monetary settlements with the budget in total budget revenues, percent**				
- state budget	24.3	16.9	10.2	0.1
- local budgets	28.3	23.1	28.0	1.7
Ratio of overdue arrears to gross industrial output, percent				
- overdue accounts receivable	77.1	75.9	76.2	55.6
- overdue accounts payable	110.1	108.5	106.5	71.4
Overdue enterprise obligations (including industrial, agricultural, and service enterprises), domestic transactions, billion UAH***				
- overdue accounts receivable	51.4	56.3	75.5	80.2
- overdue accounts payable	70.0	82.1	105.5	103.0
Overdue enterprise obligations (including industrial, agricultural, and service enterprises), foreign transactions, million USD***				
- overdue accounts receivable	835	824	292	253
- overdue accounts payable	1450	1852	2622	2676

[3] For additional discussion, see Zhylayev (1999), and Szyrmer and Kolesnichenko (2000).

[4] Because of changes in accounting methods, it is difficult to compare the share of monetary transactions in total sales for different years. While non-monetary transactions have declined over the past few years, this decline was probably less dramatic than official figures suggest.

Overdue enterprise obligations (including industrial, agricultural, and service enterprises), foreign transactions to gross industrial output, percent****				
– overdue accounts receivable	0.5	1.3	1.1	0.6
– overdue accounts payable	0.7	1.8	1.9	1.1

* Ukrainian government statistics authorities have collected data on accounts payable and accounts receivable (enterprise obligations) since January 1, 1993; the share of overdue enterprise obligations, including foreign economic transactions, since January 1, 1997; and payables and receivables in industrial enterprises by sectors since October 1, 1997.
** Data for 1999 and 2000 is according to the Ukrainian government's estimates (Report, 2001). According to other estimates, the volume of non-monetary settlements with the budget is much higher. For instance, Vakhnenko (2000) estimates these settlements at UAH 10.1 billion, or 36 percent of total revenues of the 1999 consolidated budget.
*** End of year; current prices; small businesses and organizations financed from the budget excluded.
**** End of year; transactions secured by promissory notes.

Sources: About Social (January 1998, January 1999, January 2000, and January 2001), Bulletin (1999/4 and 2001/1), Bulletin of NBU (1998/12, 1999/12, and 2000/12), Sales (1997,1998, 1999, and 2000), Statistical Bulletin (January 1998, January 1999, January 2000, and January 2001), and authors' calculations

3. Consequences of demonetization

A microeconomic approach must be used in order to understand the process of demonetization observed at the macroeconomic (aggregate) level.

As enterprises adjust to a transition economy, they form "new entrepreneurial organizations" – informal clusters of businesses, vertically or horizontally integrated, containing a number of financial and production enterprises, each of which operates officially as a separate legal entity.[5] This leads to the development of a whole network of market intermediaries, specializing in distribution and sale of products. These intermediaries shoulder the high commercial risks while demanding the appropriate compensation (Sladkevich, 2001).

The demonetized sector operates similarly to a multi-currency system in which various money substitutes are used. These substitutes sustain market segmentation, enabling economic agents to manipulate the system in order to generate rents. Government interference, in the form of arbitrary fiscal and price decisions, further exacerbates segmentation. When inputs are expensive and tax authorities prohibit selling products at prices lower than officially declared costs, the use of money substitutes often becomes the only

[5] See "Transactions in Transition: To Barter or Not to Barter?" in this volume.

viable option for an enterprise if it wants to stay in business.[6] Local price equilibria emerge separately in each market segment.

By means of non-monetary transactions, enterprises adapt their business strategies to the conditions prevailing in a transitional economy. In Ukraine, the system of non-monetary operations has gradually developed into a primitive kind of highly segmented and nontransparent market. This market makes it possible for many enterprises to survive, and to continue employing labor and contributing to Ukraine's GDP. Thanks to this market, some of them are also able to earn extraordinarily high profits.

The market segmentation results in different prices for the same product. For example, the barter price of gasoline in exchange for grain exceeds its monetary price three to five times; and the barter price of metal is 50-70 percent higher than its monetary price (Zhylayev, 1999).

In 1996 the average production cost of one ton of grain was UAH 99. At the same time, grain was also delivered at the following average prices: to procurement organizations (government), at UAH 220; to private individuals as in-kind wages, at UAH 97; to purchasers at farmer markets and stores, at UAH 164; and in barter transactions and other non-monetary operations, at UAH 174 (Zhylayev, 1999).

Barter prices of agricultural products tend to be lower than official procurement prices. In 1998, average agricultural barter prices were 25 to 50 percent lower than the corresponding procurement prices (Zhylayev, 1999).

Barter prices of industrial products in mutual settlements with the budget tend to be higher than equivalent monetary market prices. In 1995, mutual settlement prices in manufacturing exceeded monetary prices by 20-30 percent. At the beginning of 1996, this difference rose to 50–70 percent (Malakhov,1996). In 1998–99, it rose again to 100–150 percent. "A product will cost 20-50 percent more in a barter transaction than in a cash deal. This is evident in the price differences for homogeneous goods auctioned for cash. Thus prices at gas and grain auctions are significantly below 'normal', i.e., below barter prices" (The Next 1000 Days, 1999, p. 19).

Losses incurred by coal mines due to the barter scheme "coal–coke–metal" amounted to 40 percent (Region, 1998).

4. Socioeconomic cycles

The demonetized sector is characterized by a certain intrinsic logic that brings about time-related fluctuations, which follow certain specific patterns. These patterns may be explained by the physical laws of wave dynamics.

[6] See "The Fundamental Macroeconomic Cause of Barter and Arrears in Post-Soviet Economies" in this volume.

At the beginning of the twentieth century, social scientists discovered that fluctuations in socioeconomic developments occur according to the principle of perpetual and periodic fluctuations, which are either in harmony or in conflict with one another. At the beginning of the last century, it was also noticed by philosophers that various socioeconomic indicators are prone to a rhythmic undulation or cycling, which is regularly manifested in periods of either increased or decreased intensity.

A **cycle**[7] begins with the structural collapse of a socioeconomic system, which occurs during the declining phase of the previous cycle. When the minimum (the trough) is reached, a structural change within the system begins to take place. This change can be broken down into three "stages":

(1) the "calm before the storm" – a slowdown in the process of structural transformations;
(2) the "apogee" – an outbreak in the intensity of the structural change during the ascending phase in the cycle; and
(3) the "outcome," after which a new downturn begins.

In the so-called Juglar's cycle,[8] the shift in one parameter brings about shifts in others, and these changes continue to occur in a cyclical pattern. The beginning of a new cycle takes place when an extensive crisis, and eventually a system-wide transformation, takes place. Structural crises arise from the disparity between the economy's structure and its functions. Thus, some of the current economic processes are cyclical in character.

The **economic cycle** is often defined as a regular changeover to a new stage of development of the economic system. This process is characterized by a partial repetition, manifested by the re-occurrence of similar phases with similar characteristics. Economic cycles can be divided into:

- **functional cycles –** when the economy changes some of its parameters, without changing the overall path of its development; and
- **development cycles –** when the economy undergoes a profound qualitative change in its structure and functioning, eventually resulting in a shift to a new development path.

Gregory Mankiw argues that economists paid insufficient attention to the cyclical dynamics of economic development. He begins his

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[7] Cycle – (Greek *Kyklos* - wheel, circle, ring, disk) denotes a round of years or a recurring period of time, especially one in which certain events or phenomena repeat themselves in the same order and at the same interval. See: Random House Webster's Unabridged Dictionary. 1997. – 2nd ed., New York: Random House.

[8] Juglar's cycles are related to the reproduction of capital. They are long-term cycles (8-12 years), with distinctive phases embracing the whole process of capital formation.

chapter on economic fluctuations by quoting John B. Clark: "The modern world regards business cycles much as the ancient Egyptians regarded the overflowing of the Nile. The phenomenon recurs at intervals, is of great importance to everyone, and natural causes of it are not in sight" (Mankiw, 2000, p. 236).

Over the past decade, both functional cycles (short-term seasonal fluctuations) and development cycles (long-term structural transformations) can be observed in the economic processes taking place in Ukraine. In this analysis, the focus is on the seasonal fluctuations. Long-term trends are also noticed, but since Ukraine still remains in the initial stages of transition, more research (and time) is necessary to identify robust long-term cycles.

5. Cycles in the demonetized sector

An initial analysis of the monthly arrears of Russian enterprises in 1993 generated the following findings (Volkonsky, Hurvich, and Kantorovich, 1995):

1. A number of simultaneous cycles occur, each one lasting approximately three months.
2. The upward trend is slow until June, but the rate increases significantly in the second half of the year.
3. The industries can be divided into two distinct groups, each with a different cyclical pattern. The first group includes Power, Fuels, and Machinery; and the second – Metals and Chemicals.
4. The increase in output is accompanied by an increase in accounts payable; accounts receivable, however, are not affected.

A study of the 1994-97 period in Ukraine confirmed a clear cyclical pattern in the changes of the ratio of accounts payable to gross industrial output (TACIS BISTRO Facility, 1997). This research also revealed an intense cyclical flow of arrears (the "payables-receivables" chain feedback) throughout the economy. When a large number of enterprises accumulate mutual arrears, it becomes impossible to identify the "original" debtors and the "original" creditors.

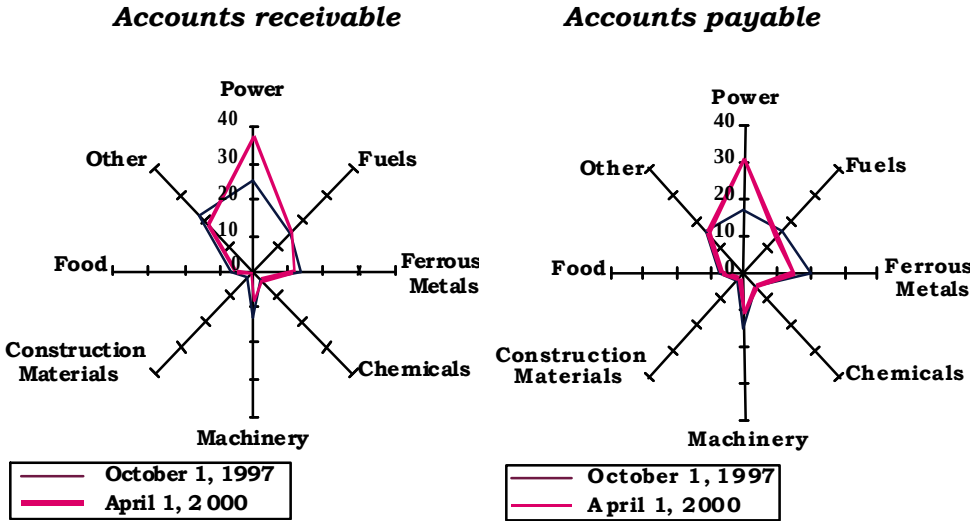
6. Ukraine's demonetized sector

Figure 1 shows that considerable changes in Ukraine's demonetized sector occurred between the fall of 1997 and spring of 2000. As of October 1, 1997, the share of the combined obligations of three industries – Power, Fuels, and Ferrous Metals – in the total volume

of Ukrainian enterprise obligations amounted to 53.5 percent of both accounts receivable and accounts payable. As of April 1, 2000, the figures were 64.0 and 60.1 percent respectively. The share of these industries in the gross industrial output increased from 48.6 to 52.0 percent.

Figure 1

Structure of financial obligations in manufacturing, by industry, percent of total obligations (the sum of all obligations in manufacturing = 100 percent), October 1, 1997, and April 1, 2000



Sources: About Social (January 1998, January 1999, January 2000, and January 2001), Bulletin (1999/4 and 2001/1), Bulletin of NBU (1998/12, 1999/12, and 2000/12), Sales (1997, 1998, 1999, and 2000), Statistical Bulletin (January 1998, January 1999, January 2000, and January 2001), and authors' calculations

Differences in the magnitudes of obligations in various industries could be explained by the type of goods each industry produced – intermediate versus final-consumption goods – and by the specific payment procedures followed.

Investigating regularly occurring phenomena in the cyclical dynamics of Ukraine's demonetized sector requires the separating of industries into three groups according to their distinctive features and development trends:

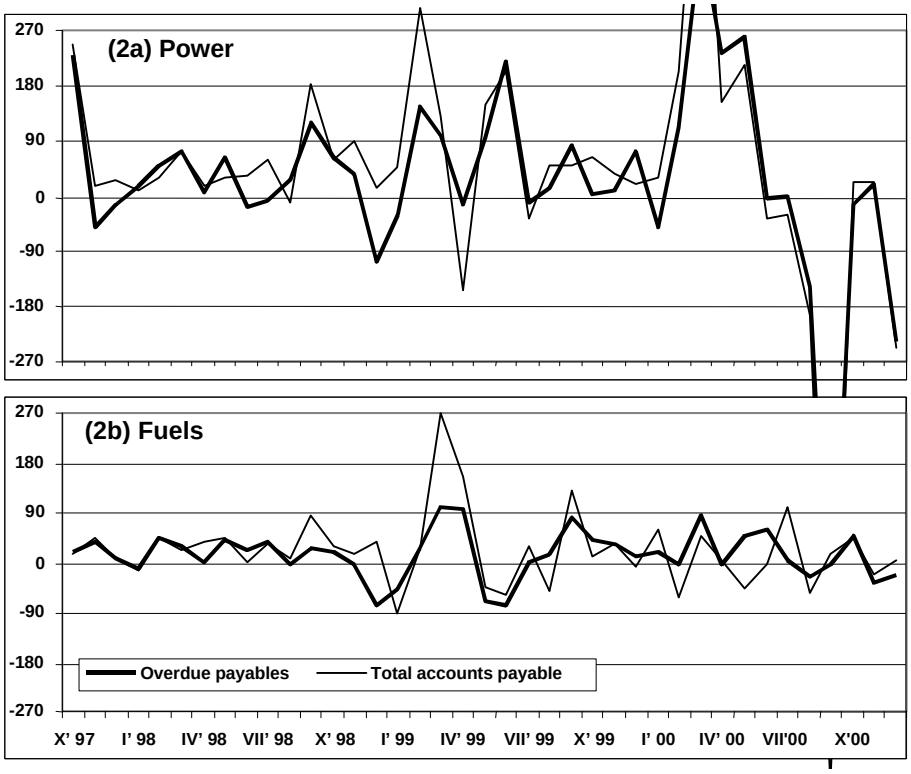
- Power and Fuels (Figures 2a and 2b)
- Ferrous Metals and Construction Materials (Figures 2c and 2d)
- Machinery and Food (Figures 2e and 2f)

Similar to the studies mentioned above, the focus of this analysis is on the changes in flows of non-monetary transactions. Price inflation and shifts in exchange rates complicate and distort the relationship between flows and stocks. Due to significant price changes, the flows (i.e., current transactions) are not directly compatible with the stocks (i.e., liabilities generated by previous transactions). Thus, for the sake of analyzing the dynamics of non-monetary transactions, it becomes convenient to use flow-to-flow measures (rather than flow-to-stock measures), such as the ratio of non-monetary transactions to total sales. The use of flow-to-flow measures secures price compatibility and allows one to take into account the impact of changes in business activity.

Figures 2a through 2f demonstrate changes in accounts payable, both total (current and overdue) and arrears (overdue payables only), for selected industries during the period October 1997 – December 2000.

Figure 2

Ratio between changes in accounts payable in industrial enterprises and gross industrial output, selected industries, percent, monthly, October 1997 – December 2000




(2c) Ferrous Metals
(2d) Construction Materials
(2e) Machinery
(2f) Food
270
180
90
0
-90
-180
-270
Total accounts payable
Overdue payables
X'97
I'98
IV'98
VII'98
X'98
I'99
IV'99
VII'99
X'99
I'00
IV'00
VII'00
X'00

Sources: About Social (January 1998, January 1999, January 2000, and January 2001), Bulletin (1999/4 and 2001/1), Bulletin of NBU (1998/12, 1999/12, and 2000/12), Sales (1997, 1998, 1999, and 2000), Statistical Bulletin (January 1998, January 1999, January 2000, and January 2001), and authors' calculations

Findings:

1. Discernible seasonal fluctuations can be identified for the entire period.
2. In December 1998, all industries demonstrated a drastic decrease in their overdue payables, while their total payables remained almost unchanged. It seems that this decrease was a result of a combination of several factors, including accounting standard changes, such as a redefinition of arrears (overdue payables).
3. Interestingly, a sharp decline in overdue payables resulted, after a few months, in a strong increase in both total payables and overdue payables. Among possible causes of this increase were such factors as:
   - a soft-budget-constraint-type behavior: a softness in treating enterprise debt sparks further softness expectations and produces more debt;
   - maturing of previously postponed payables: the overdue arrears, re-classified as "current" liabilities, if not paid, sooner or later become "overdue" again;
   - low liquidity of both financial and non-financial enterprises due to the 1998 fall crisis; and
   - the government's anti-crisis measures that further stiffened an already rigid economy.

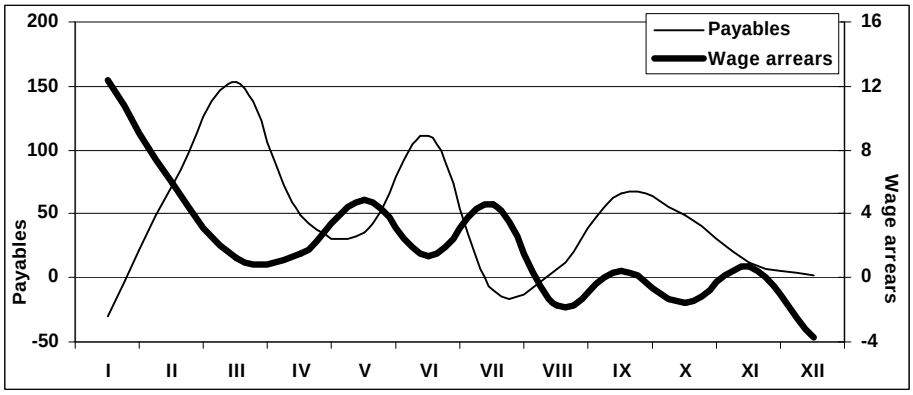
Regular annual cycles continued during the entire period 1997-2000 period (Figure 3). The annual cycle of total payables consisted of three waves that peaked in March, June, and September. Each wave had a different length: four months (January-May), two months (May-July), and six months (July-January).

Wage arrears amount to only a small percentage of total arrears; however, their social significance makes their analysis especially important. Arrears in wages and social security payments have proved to be the main factor precipitating a decrease in household income during a time of rapid disinflation. In 1996, wage arrears increased 6.5 times, from UAH 575 million at the beginning of the year to UAH 3.7 billion at the end of the year. In 1998, employees (total economy) were paid 78 percent of their wages on time. In 1999 this rose to 83 percent, but agricultural employees were paid only 47 percent of their annual wages. Generally, 1998-99 wage arrears stayed within the range of 20-50 percent, compared to total wages.[9]

[9] Unpaid wages in January 2000 amounted to UAH 672 million or 32 percent of accrued (total) wages (Zhylyaev, 2000b).

Figure 3

Enterprise payables* and wage arrears, percent, monthly averages, 1997-2000**



* Ratio between (1) changes in total enterprise payables (including industrial, agricultural and service enterprises), domestic transactions; and (2) gross industrial output.
** Ratio between changes in wage arrears and wages paid.

Sources: About Social (January 1998, January 1999, January 2000, and January 2001), Bulletin (1999/4 and 2001/1), Bulletin of NBU (1998/12, 1999/12, and 2000/12), Sales (1997, 1998, 1999, and 2000), Statistical Bulletin (January 1998, January 1999, January 2000, and January 2001), Trends (2000 and January 2001), and authors' calculations

During the 1997–2000 period, a significant seasonal pattern is noticed in the ratio between wage arrears and paid wages (Figure 3).[10] The curve peaked at the beginning of the quarter in January, April/May, July, and October/November; and dipped at the end of the quarter in March, June, August/September, and December.

The relationship between total enterprise payables and wage arrears is strongly negative.[11] This strong seasonal pattern is mostly a result of the institutional environment in which the enterprises operate. An interesting **path-dependence** phenomenon occurs. In the Soviet economy the cyclicality was produced by the plan fulfillment process: the enterprises had to meet specified output quota by the end of each quarter and, more importantly, by the end of the year. The current tax collection system, involving different quarterly and annual tax and wage payment deadlines and penalties for non-compliance, results in a new strong cyclical pattern. Some payments – especially taxes and wages – are crowded at the end of

[10] Paid wages include the payment of those for the current month, plus the clearing of arrears for the preceding periods listed for the current month.
[11] Pearson correlation coefficient for first differences for the two time series is negative 61 percent [-0.61].

the quarter, and some – like inter-enterprise debts – at the beginning of the quarter (inter-enterprise liabilities). Wage arrears increase drastically at the beginning of the year, especially in January, and are paid back at the end of the year, especially in December.[12] Total enterprise payables decline drastically in January but increase rapidly at the end of first quarter in March. This increase may be related to the massive write-offs of enterprise debts to the government that often occur at the end of the year.

Another important phenomenon is the strong positive relationship between enterprise gross receivables, gross payables, and net arrears (Figure 4). The maximums and minimums in the stock changes of accounts payable, accounts receivable, and net arrears tend to coincide in time. Payables display the greatest cycle amplitude, indicated by the steepest slopes of their "waves." Three clearly defined periods, or waves, were observed: January-April, April-July, and July-December. The cyclical pattern does not show any significant changes over the four years, although some cycle "flattening" trend is noticed. The amplitude of cycles in 1999, and especially in 2000, tends to be lower than that in 1997 and 1998. It is possible that a new pattern is about to begin: the shapes of curves for August-December 2000 are distinctly different from the corresponding curves for the three previous years.

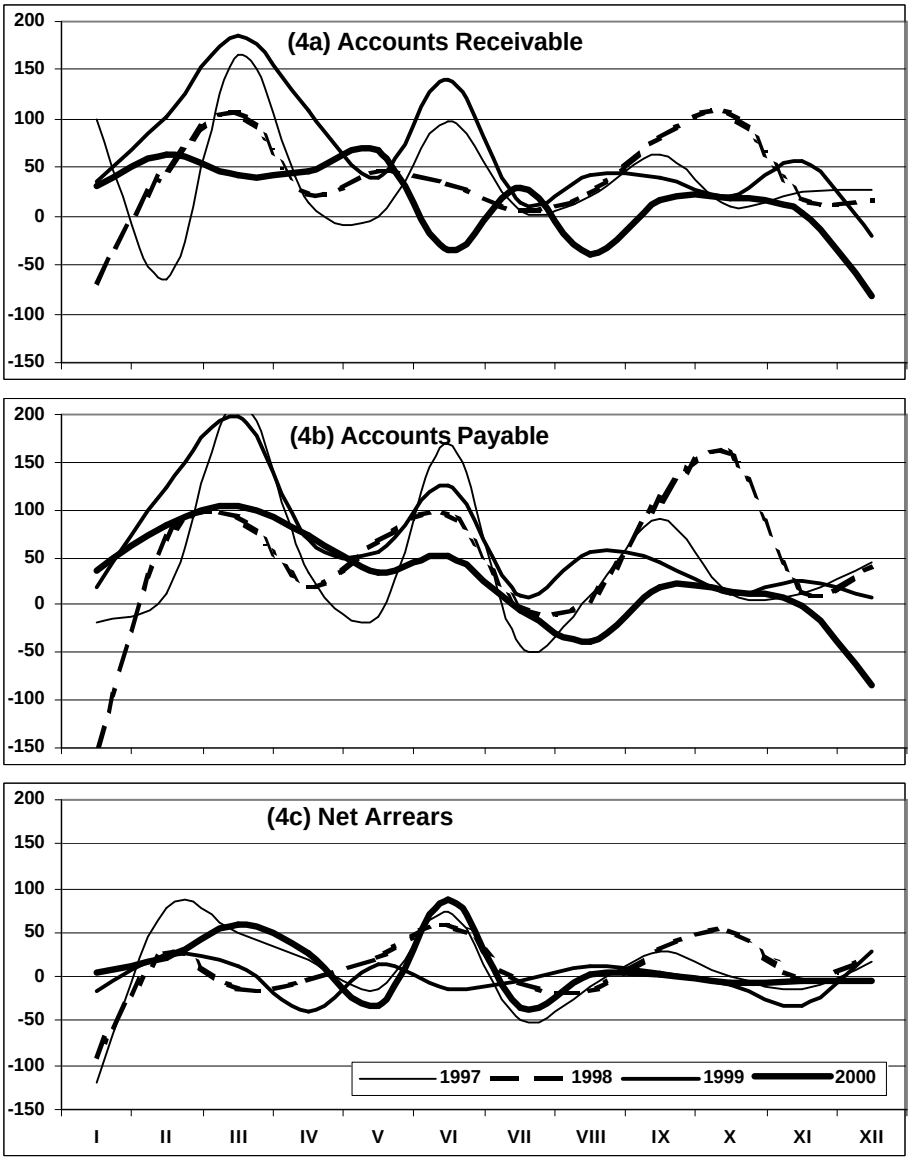
Figure 4c demonstrates the economic essence of changes in the flows of arrears. There are two ways an enterprise can reduce its arrears: by incurring fewer debts of its own, thus reducing its accounts payable; or by reducing the debts of its customers, thus reducing its accounts receivable. Positive segments of the curve show periods of a worsening in the debt position of enterprises, while negative segments show an improvement in this position. The deterioration occurs at the end of each quarter, and the improvement occurs at the middle of each quarter.

Figure 5 displays a clear trend, possibly a component of a **long-term development cycle** related to the post-Soviet transition. It shows that the demonetized sector in Ukraine has been shrinking: enterprise payables, enterprise receivables, wage arrears, and barter transactions have been declining. Figure 5 also reveals the **short-term (annual) cycle** pattern. Quarterly changes in enterprise obligations, 1993-2000, have their maximums in the first quarter and minimums in the last quarter (Figure 5a). Wage arrears the most often grow at the beginning of the year and decline at the end (Figure 5b). Barter transactions decline at the beginning of the year and stay stable during the year (Figure 5c).

[12] To a significant extent, the December lows could be explained by the payment of annual bonuses, combined with increased working hours.

Figure 4

Ratio between (1) changes in enterprise obligations, domestic transactions; and (2) gross industrial output; percent, monthly averages, 1997-2000



Sources: About Social (January 1998, January 1999, January 2000, and January 2001), Bulletin (1999/4 and 2001/1), Bulletin of NBU (1998/12, 1999/12, and 2000/12), Sales (1997, 1998, 1999, and 2000), Statistical Bulletin (January 1998, January 1999, January 2000, and January 2001), Trends (2000 and January 2001), and authors' calculations

A **sporadic component** in the dynamics of non-monetary settlements is related primarily to economic crises and the government's administrative measures. Thus, Figure 5a shows alterations in the cycling pattern caused by: (a) high inflation in 1993-1994, and (b) the economic crises of 1997 and 1998. Similarly, Figure 5b shows that increases in the amount of wages paid (area below the trend line) usually coincided with election campaigns, both parliamentary and presidential, and national referenda (Mau, 1997a, 1997b; and Zhylayev, 1999). Figure 5c shows rapid decreases in the share of barter in total sales of industrial products, which were related to the imposition of restrictions and bans on barter transactions, introduced usually at the beginning of the year. In some cases, the changes in statistical accounting methods also caused changes at the beginning of the year.

Conclusions

Non-monetary transactions in Ukraine are a proverbial double-edged sword. The positive side is that they temporarily facilitate employment and raise family incomes, as well as provide support for current economic activity. Ukrainian living standards would have been even lower if it were not for non-monetary transactions. The negative side is that the demonetized sector is inefficient. By increasing transaction costs, it drains resources away from productive activities. Further expansion of this sector would be dangerous for Ukrainian society.

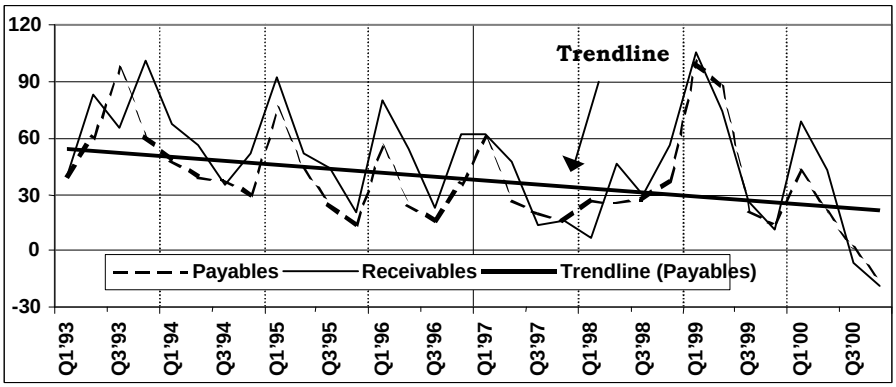
Measures aimed exclusively at enhancing controls, in order to abolish the non-monetary transactions, could result in short-term declines in output and a worsening of living standards. Policy efforts should be directed at assisting those who are forced to resort to non-monetary transactions. They should be helped to rejoin the monetized sector. This is not an easy task, given that the demonetized sector operates within a vicious circle. The government, faced with a shortfall of monetary tax revenues, applies administrative measures, typically at the beginning of the year, to combat and ban non-monetary transactions. This leads enterprises to either curtail their economic activities or to continue accumulating arrears, as a result of which tax revenues fall. The government is then forced to ease the pressure on the demonetized sector. Idiosyncratic and inconsistent measures, the use of punitive sanctions in the absence of positive incentives, as well as asymmetry in the responsibilities of the government, entrepreneurs, and employees,[13] characterize the government's policy on non-monetary transactions and stimulate further demonetization (and corruption).

[13] This asymmetry is a fundamental feature of the fiscal and financial system in Ukraine. All institutions are tailored toward bureaucratic authorities and provide little chance for an individual or for an enterprise (especially a small business, which lacks political power) to defend themselves from the abuses. The authorities have rights, individual economic actors have responsibilities. The latter pay penalties whenever they are behind schedule with their payments. The authorities view arrears as a cost-free "open credit line." They may delay the payments at their discretion. There is no effective legal system that would defend taxpayers against bureaucratic harassment by the authorities.

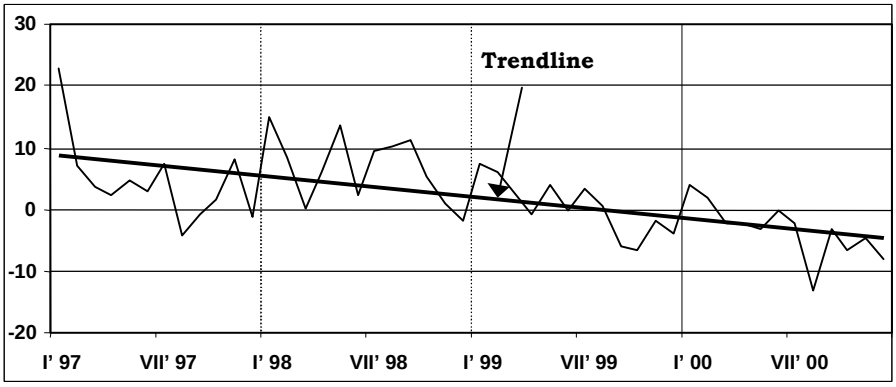
Figure 5

Demonetization trends

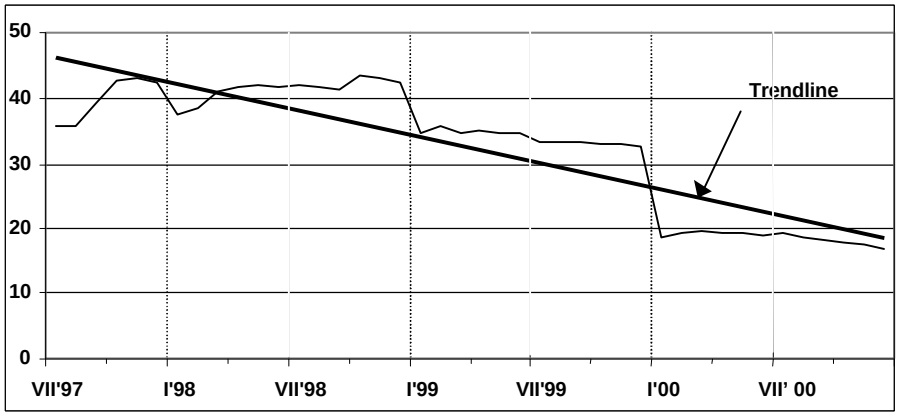
(5a) Ratio between changes in enterprise obligations, domestic transactions only; and GDP; percent, quarterly, 1993-2000



(5b) Ratio between changes in wage arrears and wages paid, percent, monthly, 1997-2000



(5c) Share of barter transactions in the sales of industrial products, percent, monthly, July 1997 - December 2000



Sources: About Social (January 1998, January 1999, January 2000, and January 2001), Bulletin (1999/4 and 2001/1), Bulletin of NBU (1998/12, 1999/12, and 2000/12), Sales (1997, 1998, 1999, and 2000), Statistical Bulletin (January 1998, January 1999, January 2000, and January 2001), Trends (2000 and January 2001), and authors' calculations

It is unfair to say that non-monetary transactions are a uniquely Ukrainian invention, and that the demonetized sector developed purely as a consequence of market reform. Its existence goes back to Soviet times, and it can also be found in the economies of many developed countries. However, the slow pace of Ukraine's market reforms has stimulated a rapid expansion of this sector, creating a radically new business environment. Those who design Ukraine's reform programs cannot afford to ignore the breadth and strength of the demonetized sector, and must find ways to reduce it.

The analytical approach used in this chapter may serve as the starting point for more detailed investigations. It should be further extended and improved upon, as additional research reveals the specifics of regions, their industries and internal structures. As detailed time series are assembled, specific cycles and the most significant relationships will be identified, and this in turn will make our explications, forecasting, and policy evaluations more precise.

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Transactions in Transition: To Barter or Not to Barter?[1]

Janusz Szyrmer

and Elena Besedina

Introduction and Case Study

A simple standard neoclassical production function (such as Cobb-Douglas, CES, etc.) transforms some factors of production (say labor and capital), by means of a particular technology, into a specific product. Within such a framework, in a relatively open competitive market, two factories, of similar size, which use similar technologies, are expected to produce a similar output and perform similarly. Therefore, it has been very insightful to study two almost identical cement factories, one in a Central European country and one in an FSU country, both being owned by same Western European company, that differ significantly in their economic performance.[2] For reasons explained below we will call the former factory the "Cash Factory" and will refer to the latter as the "Barter Factory." The Cash Factory paid wages to its workers, covered its liabilities and taxes due, and remained profitable. At the same time, the Barter Factory had large arrears for both wages and taxes, and generated losses to its owner. Interestingly, in 1998 the average wage of Cash Factory's workers was five times higher than the average wage of Barter

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[1] The authors acknowledge conceptual contributions of Vladimir Dubrovskiy and Aleksander Pivovarsky to this chapter.

[2] CASE STUDY: Research undertaken by Harvard/CASE Ukraine Project in 1999, sponsored by USAID. Several persons participated in this project: Janusz Szyrmer, Alexander Pivovarsky, Khwaja Sultan, Elena Besedina, Charles Mohan, and others. In this chapter, we use selected results of this research, as presented by Alexander Pivovarsky and Janusz Szyrmer at the Harvard/CASE Ukraine Project ~~HIID~~ Economic Policy Seminar, Kyiv, September 8, 1999 (seminar handout, Pivovarsky, 1999).

Factory's workers[3] and taxes paid by the Cash Factory exceeded those paid by the Barter Factory. This case study made obvious that neoclassical microeconomic theory is not well equipped to handle the difference in performance between these two factories.

A thorough comparative analysis identified the following main differences:

1. The total number of workers in the Cash Factory was lower than in the Barter Factory. Labor productivity in the former was significantly higher than in the latter (890 tons versus 490 tons of cement per worker, respectively).
2. Income and living standards of Cash Factory's workers were much higher than those of Barter Factory's workers.
3. Income and living standards of Barter Factory's managers were much higher than those of Cash Factory's managers (luxury housing, fashionable cars, etc.).
4. Cash Factory was not supported by local authorities while the Barter Factory "enjoyed" a lot of attention from and support by local authorities.
5. The Cash Factory used cash in its transactions – for both purchases and sales – while the Barter Factory used barter (about 90 percent of all transactions); in particular, it exchanged cement for gas, the latter used as an input in the production of the former. The share of energy in total costs in the Cash Factory was 40 percent; it was 70 percent in the Barter Factory.

After having interviewed several individuals working in, or affiliated with, the two factories we have decided that barter must be the number one suspect to be responsible for these differences. Actually, the exact calculation of costs and revenues of the Barter Factory was a difficult task. The lack of transparency in this factory's accounts was striking.

A large proportion of all transactions in Ukraine (and several other FSU countries) are variants of barter-type operations, including mutual cancellations, payments with promissory notes, arrears and simple nonpayments, equity for debt swaps, obscure debt restructuring deals, conditional debt write-offs, etc. It is therefore hard to expect this kind of economy to grow and prosper (Szyrmer, 2000a; Besedina, 2000; Zhylayev and Orlova, 2000; and Thirsk, 2000). The costs of inputs acquired by barter transactions are often

[3] CASE STUDY: In 1999, due to a significant change in exchange rates, Cash Factory's workers, in dollar terms, earned ten times more than Barter Factory's workers (average wages of USD $400 and USD $40, respectively).

from two to four times higher than in the case of cash transactions;[4] many otherwise profitable activities become unprofitable, at least officially; corruption and the shadow economy become rampant; income inequality is growing; and decapitalization, in terms of both physical and human capitals, is progressing. At the macroeconomic level, all this results in a sick, depressed economy.

The role of barter in a post-Soviet economy may be much greater than many economists would be willing to admit. We argue in this chapter that the main problem with barter is not its alleged high transaction costs, but rather its nontransparent nature. The lack of transparency creates opportunity for so-called tunneling, or leakages of money and goods outside of the official economy. Moreover, barter transactions break the market down into a huge number of separate little segments, each of them creating a small niche that provides appropriate "intimacy" for a sale/purchase contract. It is protected from the rest of the world by an invisible wall of informal connections between persons involved in barter deals usually concluded behind closed doors. An obvious negative externality of barter is its promotion of an idiosyncratic clandestine business culture, where all pieces of the officially available information – prices, wages, interest rates, sale transactions, privatization contracts, tax payments, etc. – are "virtual," not real, at best only partly true. The practice of multiple bookkeeping, or maintaining several kinds of accounts – official, unofficial for internal use, strictly confidential, etc. – becomes a business standard. People view any information with a jaundiced eye, even if it happens to be accurate. The reliability of any published data is discounted. Every official activity and every official transaction is under suspicion of corruption, and likely to be accompanied by some undisclosed hidden "attachment." Investing and doing business in such an economy turns into a major challenge that only few people are able and willing to face. Of course, this kind of duality – official and unofficial (further complicated by the multiplicity of many shades of "gray-area" operations) – does not help successful reforms and dynamic sustainable growth.

This chapter presents an effort to examine a number of hypotheses as to the causes and nature of barter, collected from the literature published over the last several years. Our objective is to improve understanding of this peculiar and obscure phenomenon and formulate some policy recommendations.

In the first section of this chapter, we present basic facts about barter in Ukraine. A literature overview and discussion of alternative hypotheses as to causes of barter is provided in the second section. This is followed by an empirical analysis of barter

[4] CASE STUDY: The Barter Factory purchased gas through barter for USD ~~$~~60-100 ~~dollars~~ per one thousand ~~of~~ cubic meters, while the cash price was as low as USD ~~$~~20-30 ~~dollars~~.

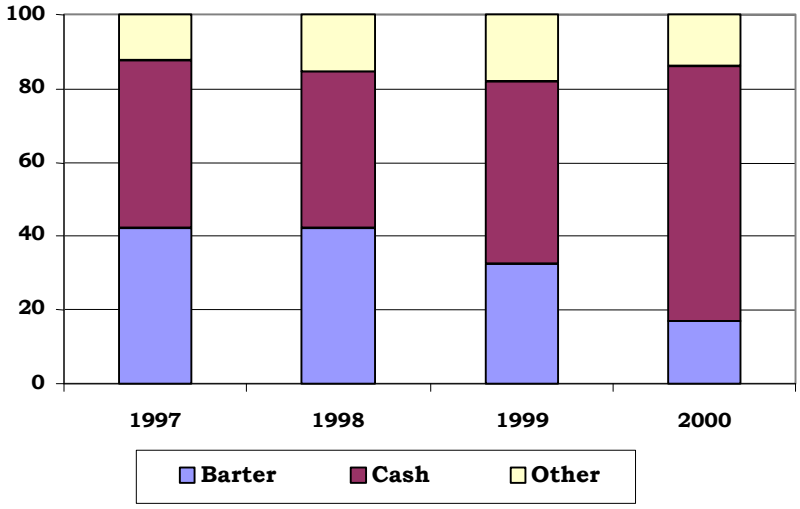
in Ukraine, 1991-2000, with a focus on the time dimension; we look at the evolution of a "barter economy." Next, we discuss two important aspects of barter: barter's relationship to the neoclassical perfect competition model in the context of globalization, as this is supported by rapid Internet development; and the issues of barter and money in terms of their relative liquidity. The final section is a Conclusion explaining why barter occurs, and ending with a strong argument for implementation of further institutional reform in Ukraine.

1. Barter in Ukraine

In Ukraine, barter statistics for manufacturing began to be systematically collected in April 1997. Barter trade is recorded with shipment of an enterprise's output. According to these statistics barter remained at about 40 percent level of total industrial shipments throughout 1997 and 1998; it declined to about 30 percent in 1999, and to about 17 percent in 2000 (Figure 1).

Figure 1

Structure of sale transactions in manufacturing, percent, 1997-2000



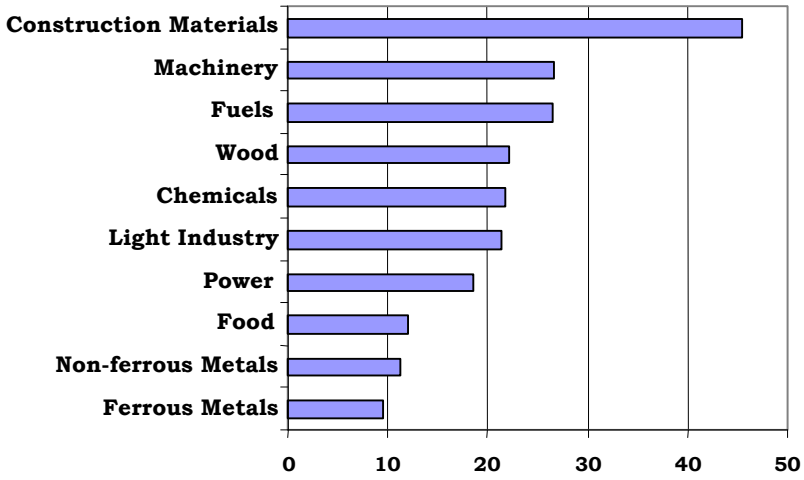
Sources: Statistics Yearbooks (1997, 1998, 1999, and 2000) and Monitoring (February 2001)

The share of barter varies significantly across different manufacturing industries. At the end of 2000 the largest barter volumes (as a proportion of total sales among manufacturing industries) are observed in Construction Materials, Machinery, and Fuels, while the smallest are in Metals and Food (Figure 2).

Barter has also been used in the fiscal sector. In 1997, barter and barter-like operations made up 25 percent of both revenues and expenditures of the consolidated budget. This figure has been declining during the subsequent years to approach zero percent in 2000 (UAH 300 million, or less than one percent of the consolidated budget). There is some evidence, however, suggesting that the actual volume of non-monetary payments in the budget sphere is much higher than the official figures indicate.[5] By some estimates, non-monetary payments in budget sector were about UAH 8 billion (rather than the official UAH 0.3 billion).

Figure 2

Barter in manufacturing industries, percent of total annual sales, 2000



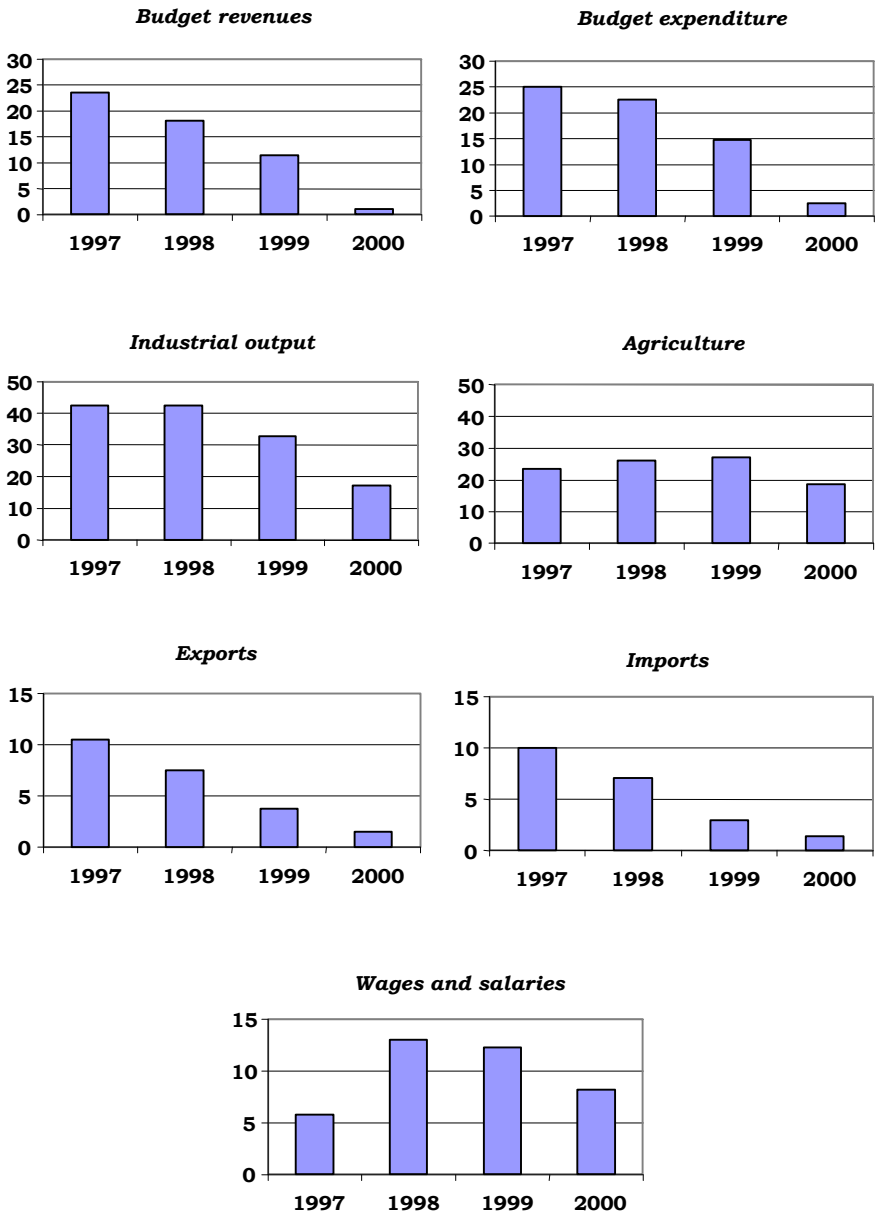
Source: Monitoring (February 2001)

Agriculture has its own barter arrangements. The inputs delivered by the state to farms or purchased with government supported bank loans are paid back, partially or entirely, with agricultural products. Most of them are deposited in the State Material Reserve. A large part of these input supplies and bank loans are never paid back, in any form. Therefore the agricultural debt has been growing. Barter as share of total sales in agriculture has been around 23-27 percent over the period 1997-1999 and dropped to around 19 percent in 2000. The highest share of barter is observed in vegetable-oil crops and grain – barter accounts for more than half of their total volume (Van Atta, Neubert, and Plakhotnik, 1998).

[5] See "Cyclical Dynamics of the Demonetized Sector" in this volume.

Figure 3

Barter and quasi-barter operations in various sectors of the economy, percent of the total amount, 1997-2000



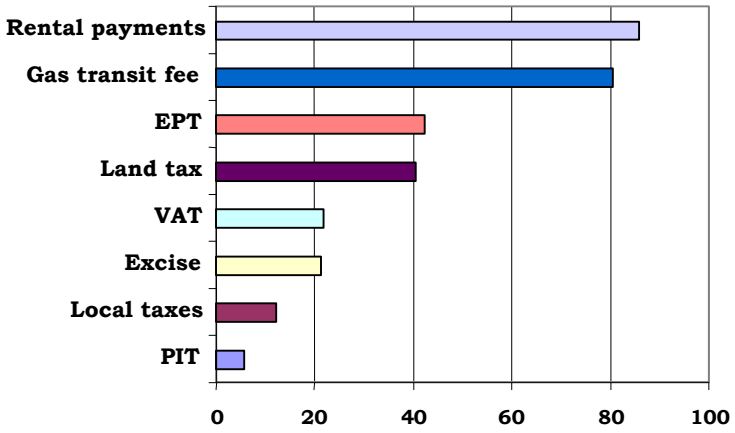
Source: Statistics Yearbooks (1997, 1998, 1999, and 2000)

The share of barter in foreign trade, in both exports and imports, fell from 10 percent in 1997 to 1.5 percent (exports) and 1.4 percent (imports) by the end of 2000. Geographically, the share of barter is generally larger in trade with the FSU countries (4 percent, in the first quarter of 2000).

Finally, in-kind payments of wages, pensions, and social benefits are still another category of barter. In 1997, wages in kind constituted 5-6 percent of all wages due (paid and unpaid). The proportion more than doubled in 1998 and remained stable throughout 1999. During the first half of 2000 the share fell to around 8 percent.[6]

Figure 4

Shares of mutual settlements in total incomes, by each category of annual consolidated budget, percent, 1999



Notes: EPT – enterprise profit tax
VAT – value added tax
PIT – personal income tax

Sources: State Tax Administration and Fiscal Analysis Office calculations (www.fao.kiev.ua and Harvard/CASE database)

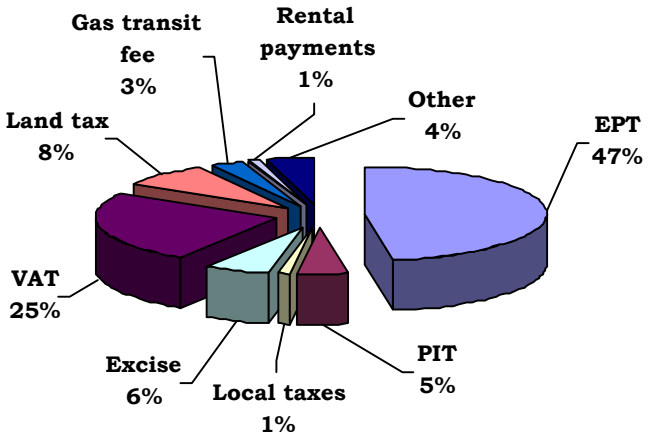
In next few paragraphs we consider in greater detail non-monetary payments in public finance. Statistics covering the budget and diverse extra-budgetary operations provide data on so-called mutual settlements and the operations with promissory notes. In 1999 the share of non-monetary revenues in the consolidated budget was around 30 percent.[7] Data from the State Tax Administration provide information on mutual settlements by categories of fiscal revenue (Figure 4). The largest share of mutual settlements is found in the

[6] Source: Harvard/CASE database, Trends, and authors' estimates.
[7] Source: H~~II D~~arvard/CASE database and authors' estimates.

revenues of rental payments,[8] reaching more than 80 percent, and the lowest (around 6 percent) is in the category of personal income tax revenues.[9] The largest portion of total mutual settlements belongs to enterprise profit tax and value added tax – 47 percent and 25 percent, respectively (Figure 5).

Figure 5

Shares of each category of annual consolidated budget in total mutual settlements, percent, 1999



Sources: State Tax Administration and Fiscal Analysis Office calculations (www. fao.kiev.ua and Harvard/CASE database)

Another category of mutual settlements are those with extra-budgetary funds. In 1999, in accordance with Articles 43 and 45 of the 1999 State Budget Law, the off-budget mutual settlements related to energy supply came to UAH 4.6 billion. Mutual settlements with the State Material Reserve Committee accounted for UAH 1.6 billion, or 35 percent of total off-budget settlements (FAO, 2000).

Unfortunately, information about barter in the Ukrainian economy is collected and presented in such a way that it is difficult to reconstruct a complete picture. We are not aware of any published document that would provide this information in a synthetic and internally consistent form. No documentation on definitions, accounting methods, etc. is publicly available. Many questions remained unanswered. For example, it is not clear how in-kind repaying of arrears is reflected in the data on industrial sales. Is it

[8] Rental payments are the payments made by enterprises for water, use of infrastructure, etc. They constitute a small fraction of enterprise obligatory payments.
[9] The more detailed analysis of the mutual settlements based on the State Tax Administration data can be found on the website of the Fiscal Analysis Office: http://www.fao.kiev.ua.

included in this data as "barter," or as "cash," or as "other"? It seems that in budget accounts the success in reducing mutual settlements was accompanied by an increase in tax arrears and in barter operations in debt payments. In other words, a swap of barter-for-debt in current accounts was "compensated" with debt-for-barter transactions in capital accounts. Similar tendencies have been observed in foreign trade.

Another problem is the definition of barter. There is a whole gamut of various semi-barter operations, involving various kinds of promissory notes, trade credit arrangements, give-and-take operations, debt-for-equity swaps, etc. They contribute to the fuzziness of the barter picture.

Barter is a nontransparent way of doing business. The lack of transparency in the official Ukrainian statistics on barter seems to be consistent with the murky nature of the barter itself.

2. Causes of barter in a post-Soviet economy: literature overview

Barter is barely noticed by the mainstream economics theory. Standard textbooks treat barter with an "honorable mention" or ignore it all together. One economics dictionary defines barter as "a method of exchanging goods and services directly for other goods and services without using a separate unit of account or medium of exchange… [that] requires double coincidence of wants" (Pearce, 1992). This is why barter is expensive. Ubiquitous occurrence of barter and other non-monetary payments in CIS countries, and their sharp increase in the mid-1990s, gave rise to a debate among economists about the underlying causes of this phenomenon (Van Atta, Neubert, and Plakhotnik, 1998; Guriev and Ickes, 1999a, 1999b; Shchur and Zhylayev, 1999; Besedina, 2000; and Thirsk, 2000). Despite significant efforts seeking to understand barter in a post-Soviet economy, it still remains an obscure issue, not well understood and highly controversial. At least one thing has been recognized by all authors: the main problems with barter in transition economies go far beyond the double-coincidence-of-wants issue.

Contradictory concepts and findings obtained from a variety of studies reflect the complex and ambiguous nature of barter. Barter finds its roots in the Soviet past of CIS countries. The Soviet planned economy was in essence a large centrally coordinated barter scheme. The direct *raison-d'être* for the occurrence of barter is an overall weakness of institutions and policies in a post-Soviet fledgling market economy. Barter appears as both effect and cause of this weakness.

The literature recognizes a large number of causes for barter. These may be grouped into four broad categories: weak policy, weak banking (weak financial institutions), weak market (weak competition), and weak corporate governance (principal-agent-type problems). We will consider each of these weaknesses in turn. There is still another important fundamental cause of barter that has not been given much attention in the literature. We refer here to all those factors that North (1994) defines as informal institutions: people's perceptions, beliefs, convictions, values, knowledge, skills, etc., that are likely to have strong effect on the way people and firms behave. These informal institutions, one way or another, remain behind the four listed above weaknesses (Szyrmer, 2000a, 2000b; and Dubrovskiy, 2000b).

WEAK POLICY

In the FSU economies, a Soviet-like soft budget constraint principle (Kornai, 1992) remains the cornerstone of state policy. The government uses high tax rates and other fiscal confiscation measures to extract money from profitable enterprises in order to support loss-making enterprises. Since, for political reasons, the government tends to avoid explicit subsidies in monetary form, it uses various indirect ways to support the losers. Different nontransparent payment arrangements enable this policy. Barter is such an arrangement. Therefore it enjoys an explicit or tacit support from the authorities.

High tax rates and shortcomings of the tax system

Central and local governments maintain their controls over the economy by taxing and spending. Taxes and other payments are the main measure that enables a large-scale redistribution of incomes. This is done partly by the rules, specifying unrealistically high tax rates, and partly by discretionary decisions of the authorities, arranging shadowy "mutual settlements" deals (Szyrmer, 2000a), imposing different kinds of penalties for some taxpayers, and granting tax debt write-offs for others, etc. This scheme enables the continuation of bureaucratic controls over an economy, despite the fact that this economy is officially liberated from the Soviet central planning dictatorship.[10] The idiosyncrasy of the tax system and excessively high tax rates and tax payments are

[10] CASE STUDY: In the case of the Barter Factory, the local authorities are heavily involved in monitoring the firm and its decisions related to payments, procurement, etc. According to a deputy head of the *rayon* administration, the firm "'violates so many rules"' that administration can always exercise some degree of control over the firm's managers. Tax inspectors and tax police are constantly present in the firm. Negotiations about in-kind payments of taxes also require good contacts with local authorities.

singled out in diverse surveys as important factors determining the choice of type of transactions by enterprises. Some 17 percent of a sample of surveyed managers gave large tax payments as a reason for using barter (Auktsionek, 1997). An out-of-balance tax policy is also singled out as an important cause of barter in several other studies (Berezovskaya, 1998).

Ineffective bankruptcy procedure and avoidance of restructuring

Enterprises use barter to maintain "the cycle of indebtedness to prevent them from restructuring" (Van Atta, Neubert, and Plakhotnik, 1998). This resistance to restructuring gets support from the state (Commander and Mumssen, 1998). "By allowing enterprises to pay taxes in kind, tax offsets provide an incentive to avoid restructuring" (Gaddy and Ickes, 1998b). Typically, an official reason to avoid bankruptcy, as preached by the government, especially by the local administration, is to protect employment and in such a way keep old inefficient enterprises operational. While this policy "…has protected jobs and reduced social unrest, it has done so at the cost of retarding the momentum for privatization and restructuring and encouraging barter" (Thirsk, 2000). It is argued that, since many enterprises are potentially insolvent, the bankruptcy of some of them could cause a whole chain of bankruptcies. In fact, the entire legal system provides effective anti-bankruptcy protections. Creditors have not much chance to benefit financially from initiating bankruptcy actions (Hendley, Ickes, and Ryterman, 1998). For example, currently in Ukraine, non-collaterized claims are paid after four kinds of obligations of higher priority are repaid: (1) collaterized claims, (2) bankruptcy procedure costs, (3) wages and other obligations toward employees, and (4) taxes and other fiscal obligations.[11] Since, under a weak real estate market and under the conditions in which most market institutions are not well established, a solid credit collateralization remains difficult to attain; creditors are not likely to satisfy their claims. The only institutional claimant in relatively good shape is the state. This again puts control back in the hands of the bureaucracy, which, at its discretion, may or may not initiate bankruptcy. Of course, factors of a predominantly non-economic nature once again dominate these decisions. Therefore, in the case of an insolvent enterprise, some barter arrangements may work quite well for both the creditor and the debtor. The government provides an effective protection for these enterprises and thus enables them to "swap products they could never hope to sell" (Gallagher, 1996).

[11] Law of Ukraine on Amendments to the Law of Ukraine on Restoring the Solvency of the Debtor or Declaring It Bankrupt VR 784-14, dated June 26, 1999, became effective on January 1, 2000.

The soft budget constraint

Obviously, the soft treatment of some enterprises requires a harsher treatment of some other enterprises in order to enable the government to collect the necessary tax revenue and to continue its micro-management of the economy. If all the enterprises were to be treated equally, the current importance of authorities would decline and direct control capacities would vanish. The soft budget constraint policy, through which the authorities chose whom to support and, hence, whom to discriminate against, is the key to these bureaucratic controls. Due to its nontransparency, barter facilitates this policy (Hendley, Ickes, and Ryterman, 1998; Guriev and Kvasov, 1999; Dubrovskiy, 2000a; and Szyrmer, 2000a).[12] Thirsk (2000), when analyzing barter in the Power Industry, argues that barter transactions enable "a complex tax subsidy scheme."[13]

WEAK BANKING

Weak financial intermediaries and high cost and low accessibility to cash result in the spread of barter transactions. The lack of cash and bureaucratic constraints imposed on the cash flow of enterprises force them to seek alternative payment schemes. These often involve a lot of creative thinking and sophistication.

Liquidity shortage

Financial difficulties are the most often stated reason for reliance on barter. Thus, in the survey noted above, 47 percent of respondents stated that lack of working capital forced them to use barter schemes (Aukstionek, 1997). The results of another survey covering 165 barter deals in 1997 revealed that in 88 percent of cases firms experienced shortage or absence of cash (Marin, Kaufman, and Gorochowskij, 2000). Findings of research based on an EBRD transition survey confirm the strong relationship between difficulties with financial liquidity and barter's share in total firm output.[14] On the other hand, recent research for Ukraine by Besedina (2000) failed to establish any important relationship between liquidity and barter.

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[12] CASE STUDY: Given its substantial tax arrears, the Barter Factory was constantly engaged in some negotiations with tax authorities. Because the firm remains the second largest employer in the *oblast*, the authorities can hardly make a threat of bankruptcy credible.

[13] "It is "as if' taxes were paid in full and from the proceeds subsidies were doled out to energy consumers who also paid in full. Instead, consumers do not pay in full, or pay in barter, and electricity companies as a result run up tax arrears that provide fertile ground for further barter transactions. Non-payment (subsidization) in this case leads to in-kind payment." (Thirsk, 2000).

[14] EBRD conducted a survey of firms in a number of transition economies, including Ukraine (250 firms) and Russia (more than 500 firms). For detailed description of the survey results ~~we refer to~~see Carlin et al. (1999).

High cost of bank credits and insufficient access to credits

Rapidly increasing inflation in the early 1990s led to very high nominal interest rates and unstable relationships between creditors and loan-taking enterprises. Nevertheless, the rapid disinflation in the mid-1990s, resulting from tightened monetary policy, also led to high nominal rates and very high real interest rates. During the entire period of the post-Soviet transition, banks in FSU countries had to operate under very difficult circumstances. Bank credits have been expensive and not easily accessible to enterprises. Hence, barter "…established itself as an economic institution to deal with the banking failure" (Marin, Kaufman, and Gorochowskij, 2000). Difficulties in accessing cash in enterprise bank accounts foster barter that does not require the use of these accounts (Shchur and Zhylayev, 1999).[15]

Kartoteka #2

The existence of *Kartoteka #2*, a phenomenon not readily understood outside the FSU, distorts economic activity and choices of agents.[16] It encourages enterprises to avoid any contact with cash (Antczak and Ivashchenko, 1997; Van Atta, Neubert, and Plakhotnik, 1998; Dubrovskiy, 1999).[17] "Barter allows the enterprises to avoid the first line of tax collection" (Guriev and Ickes, 1999b). Barter became the way to survive under conditions of huge debts and no cash on accounts (Maskalevich, 1998).[18]

WEAK MARKET

General weakness of the market enables enterprises to use different kinds of price discrimination, product differentiation, and other monopolistic practices in order to increase profits. The low level of liquidity, low degree of openness, and high segmentation lay the foundation for generation of additional rents. Also, given weak contract enforcement in post-Soviet economies, low price stability, and high level of trading risks, sellers use barter to protect themselves against possible losses. While in the cases of "weak banking" barter was often practiced as a business survival "necessity," here it becomes

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[15] David Snelbecker refers to it as "good barter" – see "The Fundamental Macroeconomic Cause of Barter and Arreas in Post-Soviet Economies" in this volume.

[16] *Kartoteka #2* is a system within which any funds entering a bank account of an enterprise that is a tax debtor are automatically allocated for tax payments and possibly to other creditors according to a priority defined by the law or designated by the tax authorities.

[17] See also "Institutional Development of the Banking System" in this volume.

[18] CASE STUDY: As concerns the Barter Factory, the company had significant overdue taxes payments and its bank directly managed the company's cash flow within the *Kartoteka #2* system. Any cash that appeared on the firm's account was almost entirely confiscated by the tax authorities and thus little was deposited.

more a means for profit maximization. Firms begin using barter not because they have to, but rather because they choose to, since they view it as a good business strategy.

Market power

Heavy engagement of some natural monopolies in barter schemes gave rise to a suspicion that monopolists "…can use barter to price discriminate among customers, collecting cash from rich ones and payments in kind from poor ones" (Guriev and Ickes, 1999b). Investigation of barter transactions in Russia demonstrates that in some cases involvement in barter is closely related to the degree of market power (*ibid*.). Though Ukrainian survey data apparently failed to provide convincing support for this hypothesis (Carlin et al., 1999) it should not be readily discarded since the occurrence of multiple prices in barter deals signals market discrimination practices.[19]

Obviously, by its very nature, barter provides good opportunity for price discrimination, since each of its transactions is basically a stand-alone operation. Under the barter scheme transactions follow a Coasian-type arrangements (Coase, 1996), in which two (or more) sides negotiate for as long as necessary to come up with an efficient solution, one which reflects the relative market power of the negotiators. Since in each case this power, which is affected by many factors, is likely to be different, the final outcome of such negotiations may also differ. In other words, each exchange may see the same good sold/purchased at a different price and under different contractual conditions, while both the price and the conditions remain unknown to outsiders. Thus, a barter contract may be Pareto efficient for the negotiators, yet price discrimination practices are, in a way, built into its procedures. As demonstrated by Korenyok (2000) and others, the opportunity for price and cost manipulations is an important factor stimulating the use of barter in commercial transactions.

Disorganization and contract risks

Barter is used to maintain production when trading relations are damaged as a result of post-Soviet disorganization (Marin and Schnitzer, 1999). As former Soviet input-output links among the enterprises, and, more importantly, among people who work in these enterprises, are ruptured, or at least weakened, the existing legal framework for official contractual obligations is not strong enough to enforce these obligations. Enterprises suffer from financial strain. Under these circumstances, barter is chosen to

[19] CASE STUDY: The Barter Factory sold a small fraction of its output for cash at prices much lower than those used in barter transactions, below ~~the~~ so-called accounting cost.

help lower transaction risks. Since barter involves tangible goods over which enterprises have more control than over money, barter contracts are considered to be safer than cash contracts. Promise to pay in cash may remain only a promise and an enterprise may end up with nothing while goods received in exchange of its products are tangible and can be sold. Barter serves as "a risk-free trade credit" (Commander and Mumssen, 1998). Enterprises create "a deal-specific collateral" in the form of goods (Marin, Kaufman, and Gorochowskij, 2000). Since such trade credit is secured with goods, barter is employed by enterprises as a strategy to minimize risk should a business partner renege on a contract.

Inflation related risks

Shifting to non-monetary payments is viewed as "a rational response by economic actors to a breakdown in the cash economy" (Van Atta, Neubert, and Plakhotnik, 1998). Similarly to the previous case (the "disorganization"), barter is used as a sort of hedging operation to protect transacting parties against the possible (often highly unpredictable) losses due to high inflation and general price instability. By trading good for good, such risks are significantly reduced.

Non-cash environment

To rephrase North's famous statement - business environment matters. If most people around speak French then in order to be able to successfully communicate with others one has to use this language. The same argument applies to barter trade. If almost everybody barters and you want to stay in business, you have to barter (Snelbecker, Besedina, and Sluchinski, 1998). Otherwise, higher transaction costs are incurred, not to mention difficulties in finding business partners. A survey of Russian enterprises in 34 regions showed that "own or partner's lack of liquidity has been unambiguously the dominant reason" for using non-monetary payments, including barter (Commander and Mumssen, 1998).

WEAK CORPORATE GOVERNANCE

A standard problem in corporate management is the issue of information available to different actors (owners, managers, workers, government, and business partners). Typically significant information asymmetries occur that are used to give advantage to those to whom the particular information is available. These asymmetries weaken corporate governance and control, while the weak governance and control tend to enforce large information asymmetries. Barter appears as a convenient instrument for hiding or distorting information at the level of an enterprise. Therefore, weak governance and barter tend to coincide and mutually reinforce each other.

Tax evasion

Information asymmetries help enterprises diminish tax payments. Barter is a convenient means for these asymmetries by enabling various cost and price manipulations. A typical manipulation consists of assigning increasing costs to bartered inputs, which justifies the reduced payments of corporate profit and value added taxes (Commander and Mumssen, 1998). Another opportunity is wage and tax payments in kind. These payments also enable different price manipulations at the expense of workers (who cooperate because they do not want to lose their jobs) and tax authorities (who may agree under certain conditions]. Tax offsets enable enterprises that pay overdue tax payments with goods and services to budget sector organizations in exchange for writing off or reducing tax arrears (World Bank, 1998; Szyrmer, 2000a; Zhylayev and Orlova, 2000; and Thirsk, 2000). Enterprises can manipulate prices in this way or simply dispose of illiquid goods and avoid cash payments.

Virtual economy

The term "virtual economy" has gained currency to define an economy that is "based on illusion, or pretense, about almost every parameter of the economy: prices, sales, wages, taxes and budgets" (Gaddy and Ickes, 1998a). In such an economy barter and arrears are used to support this pretense (Szyrmer, 2000a). The more barter is used the less transparent the transactions become and the further the virtual economy expands.

Principal-agent problem and rent seeking

The principal-agent hypothesis can be considered as an important approach for barter explanation, closely related to the concept of rent seeking. Barter helps enterprise management to generate side payments (Maskalevich, 1998) and "hide the profit-diverting activities" (Korenyok, 2000). The expansion of barter and arrears is explained by "inept and immoral enterprise management" (Gaddy and Ickes, 1998a).[20] Barter is used to hide illegal "tunneling" practices[21] (Fonkich, 2000a and 2000b).[22]

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[20] For a commentary on this approach, see "Cyclical Dynamics of the Demonetized Sector" in this volume.

[21] Tunneling practices are "value transfers from productive to non-productive industries" (~~Fonkych~~Fonkich, 2000a).

[22] CASE STUDY: For the Barter Factory,— significant informational problems have been noticed. Each barter deal was made behind closed doors. Official prices of goods were negotiated. Given the clandestine format of transactions, side payments and other transfers could not be ruled out. The owners of the firm were excluded from the negotiations.

LITERATURE REVIEW: CONCLUSIONS

Examination of the literature demonstrates that ***no hypothesis can provide a fully convincing explanation for the occurrence of barter in post-Soviet countries.*** At the same time, none of these hypotheses can be easily rejected based on available evidence.

The above-presented causes of barter are summarized in Appendix, Table A1. Each row of this table corresponds to one literature source. The references are sorted by the year of data used in research and by the year of publication. Each column represents one specific cause of barter. It is interesting to observe a peculiar diagonal pattern of this table. Research and data in different years tend to focus on different aspects of barter and its causes, and they seek to support different hypotheses. Thirsk's research (2000) appears as an outlier. Thirsk argues that little enterprise restructuring, high debt of many enterprises due to high production cost, and over-production related to over-employment are the main reasons for barter. We maintain along with many other authors (Gaddy and Ickes, 1998a, 1998b; Korenyok, 2000; Dubrovskiy, 2000a; and Fonkich, 2000a and 2000b) that, in fact, ***it is nontransparency that is the main attraction of barter***, making it a convenient tool in the hands of rent seekers.

As concerns historical causality, ***path dependence*** in the broad sense seems to be the right answer. Weak policies, weak market institutions, weak corporate governance, and last but not least weak and confused market perceptions among policymakers and other economic actors are all an inheritance from the Soviet past. Since it is not possible, in a short period of time, to change human minds and skills (informal institutions), production and distribution arrangements (formal institutions), and public decision-making (policies), barter emerges as a logical response to all these market-related "weaknesses." In other words, it would be a conceptual and methodological mistake to try to trace barter to some specific policies or specific institutions. Barter is a rational business strategy, at times even a business survival necessity under conditions of uncertainty, used by producers and traders in a given systemic context. It is consistent with their skills and behavioral patterns learned in the previous system as well as with their progress in learning new institutional arrangements and new business strategies. In the Soviet system money served more as a passive accounting unit rather than an active means of market exchange. Barter is a continuation of old Soviet production networks through which products were distributed. In a way, it is a decentralized variant of the then-used central-planning operation. Today, in place of central coordination of goods and service

exchange there is a more chaotic, less regulated, and less transparent physical allocation of production inputs and outputs, in part by way of barter.[23]

3. Ukraine: a historic perspective

Over the last decade, post-socialist economies have undergone rapid, fundamental transformations. The whole process is built around a core interaction between institutions and behavior of economic actors. The actors (policymakers, investors, producers, and consumers) keep learning and adjusting to the evolving institutional arrangements, while actively influencing the changes in these arrangements. Institutions, in turn, keep stimulating the learning of the actors, while gradually changing themselves as a result of their own "learning" and of the activities of the actors. This dynamic and highly interactive process leads toward a new system – a transition economy. It remains unclear whether this new system is just a short-term ephemeral phenomenon, or perhaps a new type, a longer-lasting aberration of a market economy. The pervasiveness of barter and other non-monetary operations in this economy makes these transactions an important attribute, perhaps even a fundamental feature of this system. In fact, it would be hard to imagine an alternative arrangement. Barter is logical for this kind of economy.

Since there is no more central planning, a market-type mechanism is needed for resource allocation. With no well-developed financial intermediaries and no skills to operate within a competitive demand-driven market, new exchange arrangements must emerge, ones that (1) avoid banking services and money, and (2) do not require much market experience.

The actors in the transition economy know how to produce goods, how to acquire physical inputs necessary for their activities, and how to deliver outputs to their clients. Yet, they are still not ready to operate in a monetized open competitive market economy with its plethora of financial institutions, complex accounting systems, deregulated prices, tough quality requirements, complex investment strategies (ones not determined and financed by the government), etc. Money is produced by the central bank, its future value is unknown, and it remains beyond the control of enterprises. Goods are produced by the enterprises, they preserve certain tangible value over time, and remain under direct control of suppliers and purchasers. Actors know how to handle tangible goods at a microeconomic level, but feel lost and confused by the unknown and uncontrollable open

[23] See also "The Fundamental Macroeconomic Cause of Barter and Arrears in Post-Soviet Economies" in this volume.

market operations shaped by some abstract monetary policies at the macroeconomic level. Under such circumstances, barter becomes a safer and more comfortable choice.

Because of the high speed of learning by the actors and incessant institutional transformations, barter transactions at one moment in time, say in 1995, were significantly different from those later, say in 2000. During these five years, a lot of changes and a lot of learning took place. Also, intense research efforts during the last few years improved our (still poor) understanding of barter and its dynamics, and its causes and effects. Today, we have access to data and empirical research that did not exist five years ago.

Paying attention to this time dimension of barter activities adds to our understanding of the causes of barter. Learning of and adjusting to new institutional arrangements constitute an investment by people and firms. Today, there exist many companies that specialize exclusively in barter operations. Managers use complex exchange networks painstakingly designed and perfected over time. Many people make their living off barter. Many companies are profitable because of barter. Many companies continue their existence thanks to barter. There have emerged powerful interests attached to barter supporting institutions. A new business experience and specific skills necessary to run barter operations have accumulated.

On one hand, progressing market reforms help efforts to monetize the economy. On the other hand, given all these structural and institutional adjustments, an economy-wide abolishment of barter becomes an increasingly difficult task (although it is not impossible under adequate and consistent policies).

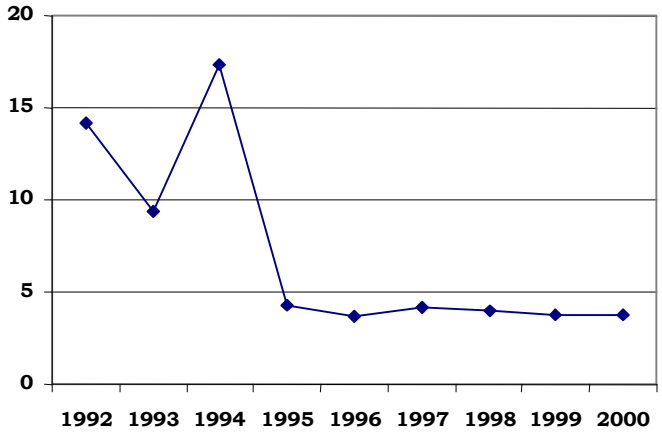
An analysis of the literature suggests that, in Ukraine, while general causal relationships between the economy and barter have remained roughly stable throughout the transition, the relative importance of particular causes and arrangements have been changing over time.

Weak policies

In the early 1990s barter was a continuation of Soviet-era activities. Enterprises continued as much as possible to use their old supply networks. The government continued its management of the economy through high-but-soft tax rates and soft-but-harmful budget constraints. Over time explicit budget subsidies to commercial enterprises became politically inconvenient. In Ukraine, these subsidies shrunk from 9-18 percent in 1992-94 to around 4 percent in 1995-2000 (Figure 6). This was a result of efforts, under the watchful eye of the IMF and other international donors, to curb hyperinflation by cutting the budget deficit.

Figure 6

Budget expenditure on the national economy, percent of GDP, Ukraine, 1992–2000



Source: Harvard/CASE database

Barter became an obvious choice of enterprises under the following conditions caused by governmental policies:

- high inflation due to high fiscal deficit
- low official budget subsidies
- very high cost of bank credit, related to policies, which were detrimental to the development of the banking sector
- high tax debt tolerated by the authorities
- frequent debt write-offs approved by the authorities
- very low unemployment rate and official avoidance of bankruptcies of loss-making enterprises
- slow and nontransparent privatization, which has been dominated by insiders
- significant administrative impediments to the creation and development of new profitable market-oriented firms
- unstable exchange rate, and
- gradually increasing impediments to foreign trade

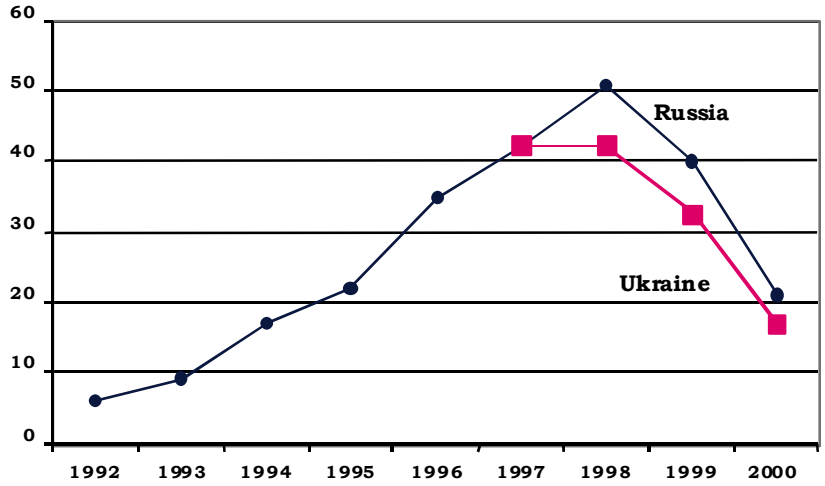
As a result, enterprises had to use barter or chose to use barter whenever possible.

There is no systematic data on barter in Ukraine for years before 1997. Since there are similar patterns in the use of barter in Ukraine and Russia, it seems that data on Russian barter can be used as a crude approximation for barter activities in Ukraine

(Figure 7). In the early 1990s industrial barter remained at a relatively low level. In the years 1995-97 it soared from about 20 to 40 percent of total sales of industrial output. In 1998 this share reached its peak in Russia (around 50 percent) and remained stable at about 40 percent in Ukraine. Since then, it has been shrinking in both countries. In 2000, it was 17 percent in Ukraine (at the end of the year), and 30 percent in Russia (at the end of August).

Figure 7

Share of barter in the industrial sales, percent, Russia, 1992-2000; and Ukraine, 1997–2000



Note: The year 2000 figure for Russia is as of the end of August.

Sources: Harvard/CASE database, Monitoring (February 2001), and Russian Barometer

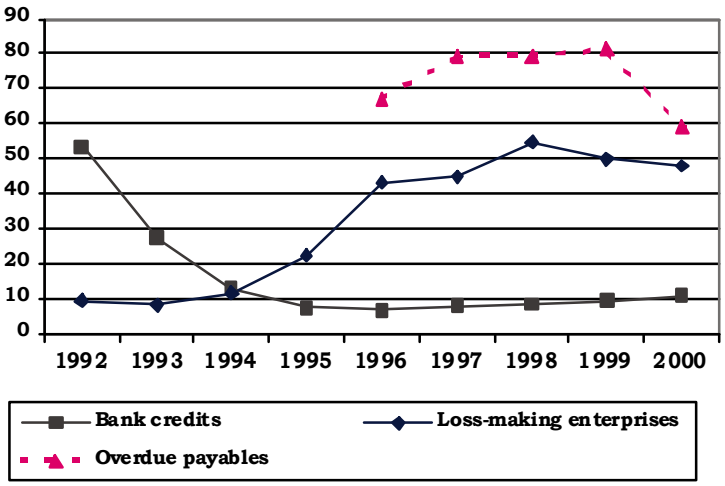
One can argue, however, that barter was widely used from the very beginning of transition, even if it was not classified as such. In the early stages of transition, barter was practiced in a more hidden or implicit form. Enterprises simply kept exchanging products at price covering costs, while the state sought to subsidize these prices by as much as possible. The main problems were: (1) a many-times increase of costs of energy inputs; and (2) output markets' shrinkage due to new state borders and shifts in demand. This Soviet-type multilateral "implicit" barter among enterprises, over a longer period of time, was a recipe for disaster. Most enterprises remained state owned or at least state controlled. An almost full employment was preserved (at least officially). As not difficult to predict, GDP declined, and inflation reached very high level (for a short period, its annual

rate even exceeded 10,000 percent). Under such conditions barter was a convenient way of doing business, although all transactions were formally expressed in monetary units and in most cases were not officially recognized as barter transactions.

In the mid-1990s, in the wake of the imposition of fiscal discipline, barter turned into a main policy instrument used by state and local authorities to support insolvent enterprises. Between 1994 and 1995, a dramatic decline of open state subsidies to enterprises, from 17 to 4 percent, was followed by a spectacular increase in both the volume of barter transactions and the number of loss making enterprises. Between 1995 and 1997, the values of both indicators – share of barter transactions in total industrial sales and share of loss-making enterprises in total number of enterprises – doubled from 22 percent to about 44 percent each (Figures 7 and 8). In the years 1998-2000, the subsidies slightly rebounded, loss-makers mildly declined and barter shrunk from 42 to 17 percent.

Figure 8

Loss-making enterprises, percent of total enterprises, end of year, 1992–2000; bank credits to enterprises, percent of GDP, end of year, 1992–2000; and overdue payables of enterprises, percent of GDP, end of year, 1996-2000



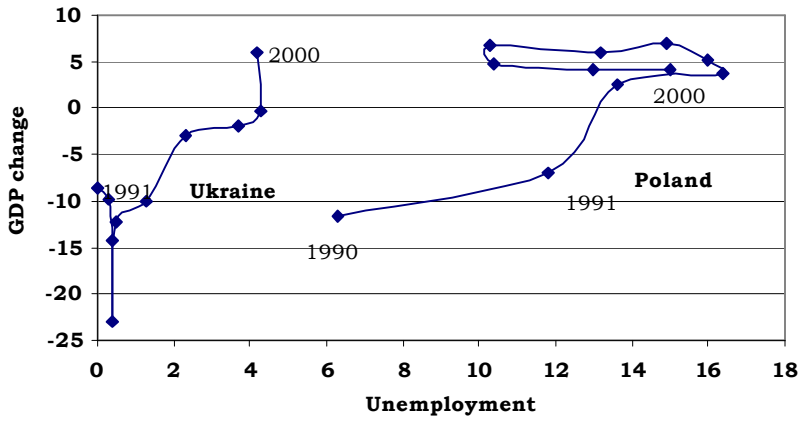
Sources: NBU and Harvard/CASE database

The official support for high employment resulted in the effective support (or at least tolerance) for loss-making. The consequence has been economic decline and large hidden unemployment. Figure 9 shows the relationship between growth and unemployment in

Ukraine and Poland during the last decade. In Poland, as in several other former Soviet bloc countries, the imposition of financial discipline (hardening of the budget constraint for enterprises) and enterprise restructuring resulted in high unemployment, greater enterprise profitability, and economic growth. Ukraine, on the contrary, keeping unemployment low, experienced pronounced economic decline. At the end of the decade, Ukraine was among the group of countries within Central Europe with the lowest GDP per capita, lowest wages, lowest unemployment, and highest barter. When loss-makers are allowed (or are encouraged) to survive by the government, they have to find ways for balancing their accounts. Under such circumstances, a system of creative "virtual" accounting becomes the way to do business and barter is an obvious choice for transactions.

Figure 9

Real GDP growth, annual change, percent, and unemployment rate, percent, Ukraine and Poland, annually, 1990–2000



Source: Harvard/CASE database

This protection of jobs and slow restructuring of enterprises is an important reason for the spread of barter. A large number of Ukrainian enterprises still operate in the "old economy." This economy is dominated by (but not limited to) the state-owned enterprises, which are "…characterized by chronic nonpayments from customers and to suppliers, soft budget constraints, extensive use of barter to settle debts and persistent wage and tax arrears. These enterprises are typically awash in a sea of red ink but somehow find ways to continue their operations, both through barter transactions, which severely weaken market disciplines, and explicit and implicit government

subsidies. In Ukraine, representative members of the old economy include the coal and agriculture sectors" (Thirsk, 2000).

Improvements in Ukrainian economic policies resulted in 2000 in a gradual hardening of budget constraint, less barter, less arrears,[24] less loss-makers, more bank credits (see below), and, for the first time in a decade, a positive economic growth.

Weak banking

In the mid-1990s, fiscal and monetary disciplines imposed on the enterprises cut off easy access to cash. The complex restrictions concerning enterprise access to their accounts, including an extreme form of these restrictions – the *Kartoteka #2* system – left many with virtually no cash. Tight monetary policy in the mid-1990s resulted in the decline of the amount of bank credits to enterprises (Figure 8) and very high nominal and real interest rates. While in years 1992-95 real interest rates were highly negative, in 1996-99 they became highly positive, with a significant drop in 2000 (Table 1). Given the high tax rates and low profitability, few enterprises could afford these rates.

Table 1

Real interest rates on bank credits in national currency, annual average, 1992–2000

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Rate	-34.0	-9938.9	-198.3	-72.9	37.3	39.0	34.5	34.2	14.5

Note: The real interest rates, r, are calculated according to: $r = i - p$, where i is annual nominal interest rate and p – annual inflation. Nominal interest rate is a weighted average across credit portfolios of commercial banks.

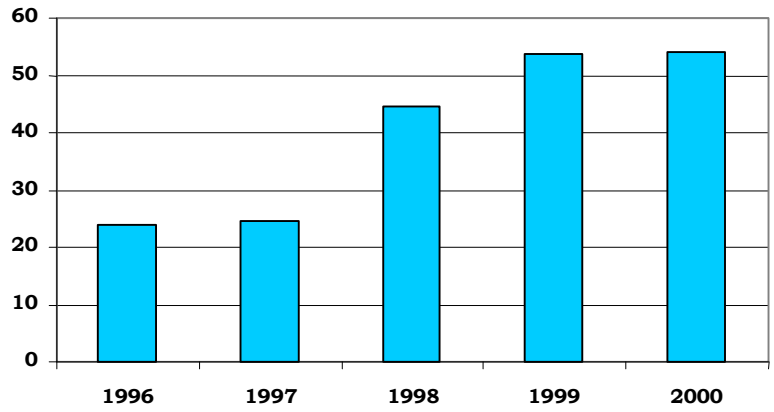
Source: Harvard/CASE database

Banking, from a sector that assists enterprises in their inverstment, production, and trade activities turned into an industry whose main function became to control enterprises and to collect taxes. Debts of enterprises within the *Kartoteka #2* system (introduced in 1996) grew rapidly and in 2000 reached an amount equivalent to more than a half the annual GDP (Figure 10).

[24] See "Cyclical Dynamics of the Demonetized Sector" and "Industrial Production and Finance" in this volume.

Figure 10

Debt of enterprises on *Kartoteka #2*, percent of GDP, end of year, 1996-2000



Sources: NBU, Harvard/CASE database, and authors' calculations

Banking, instead of multiplying savings of the population, ended up stripping people of their meager deposits, through inflation, exchange rate changes, different kinds of interest rate manipulations, and various restrictions on using money placed on bank accounts (Szyrmer et al., 2000). Negative real interest rates in the early 1990s, the sudden collapse of national currency in 1998, and again negative real interest rates in 2000[25] have systematically undermined depositors' confidence into the national banking system.[26] Avoiding domestic currency and domestic banks as well as escaping to foreign currency and barter became a logical survival strategy, especially for those enterprises that were not able to pay wages and service their other liabilities. The "barter-or-not-to-barter?" question became rhetorical for many agents. If you want to stay in business you have to barter!

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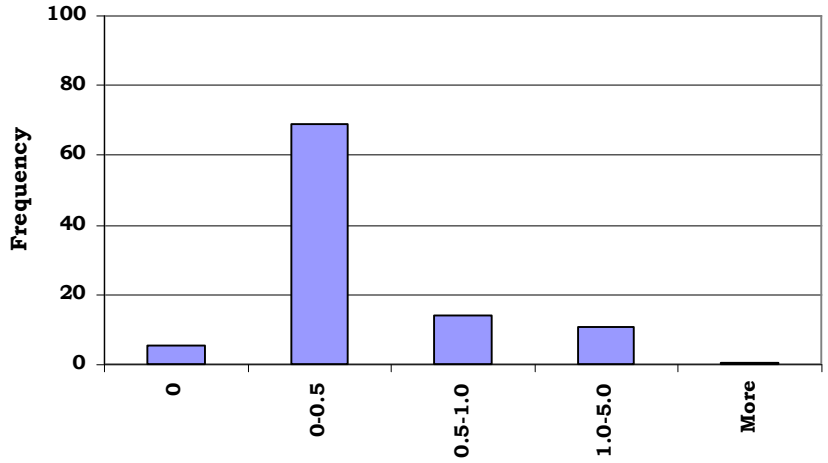
[25] Nominal interest rate for bank deposits (weighted average) for 2000 was 13.5 percent; applying the formula used above (Note to Table 1) we get negative real interest rate of around negative sixteen (-16) percent (the year-to-year annual inflation in 2000 was about 25 percent).

[26] In order to avoid the mistakes of the previous decade, medium-term and long-term effects of the monetary policy must be thoroughly accounted for. A peculiar monetary cycle seems to have emerged: (1) undervalued hryvnia and current account surplus; (2) fast real appreciation of the hryvnia; (3) overvalued hryvnia and current account deficit; (4) collapse of the exchange rate and decline of foreign trade; (5) undervalued hryvnia and current account surplus; etc. The official macroeconomic forecast for the ~~next~~ year 2001 assumes further real appreciation of the hryvnia. At one point this appreciation will reach a level, at which it will become harmful for the economy. It seems that currently (spring 2001) the hryvnia is not far from this point, but where this point is exactly located remains debatable.

All the above led to a shrinking of funds in bank accounts (Figure 11). In 1998, the average ratio of enterprises' cash balances on bank accounts to total annual sales was very low – it amounted to only 0.45 percent. Three quarters of enterprises kept their cash accounts at a balance lower than 0.5 percent of their total annual sales turnover.[27] Under such circumstances, enterprises experienced significant cash flow problems. They did not have enough cash to service their transactions and most of them could not afford bank trade credits. They had to barter.

Figure 11

Cash on accounts, percent of total industrial annual sales, 1998



Source: Harvard/CASE database (see section 5 in this chapter)

Weak market

In the late 1990s, the transition in most FSU economies reached a stage where some market institutions began operating. People learned how to behave under these new arrangements and barter was transformed into a sort of trading insurance in a high-risk environment. Under unsafe property rights and weak contract enforcement, barter helped reduce the risks. Empirical research of 165 barter deals conducted in 1997 showed that firms using barter in the range between 20 and 60 percent of total sales performed overall better than other enterprises (Marin, Kaufman, and Gorochowskij,

[27] We used data from the balance sheets of industrial enterprises for 1998 (~~HIID~~ Harvard/CASE database).

2000). Thus, if an enterprise barters in some instances and does not barter in others – practicing some peculiar kind of price discrimination – it ends up being better off than that choosing either zero or 100 percent barter option. The price discriminating enterprises seem to be using barter for the sake of some market strategies to maximize profits.

Barter provides a good opportunity to generate monopolistic rents by manipulating quantities, qualities, and prices, i.e., by practicing product differentiation and price discrimination. Frequently an enterprise can charge many different prices for the same ("homogeneous") product:

- The price would be zero in the case of nonpayment and some special deals (debt write-offs, etc).
- It will be low (or very low) when some promissory notes or other forms of obligations are used, or when arrears (late cash or in-kind payments) arise.
- The price would be much higher if the purchaser pays in cash on time.
- Finally, the official price may be very high in the case of barter (2-3 times higher than the cash price), though a true price, due to diverse open and hidden price manipulations, may be actually much lower than the cash price.[28]

Weak corporate governance

As new transition-related institutions and policies solidified, the process of "learning-by-doing" has continued. New opportunities for profitable activities and transactions have been discovered and mastered by economic actors. Low transparency is an intrinsic feature of barter and, hence, it made it an attractive way to conduct business. It enables the actors to hide information (and exacerbate information asymmetries among different actors). In particular, to increase profits and seek rents, information is being withdrawn from tax authorities (tax evasion), from firm owners (very low dividends in state owned and outsider owned enterprises), business partners (whose deliveries are not paid on time or not paid at all), and from workers (very low wages, wage arrears, and payments of wages in kind).

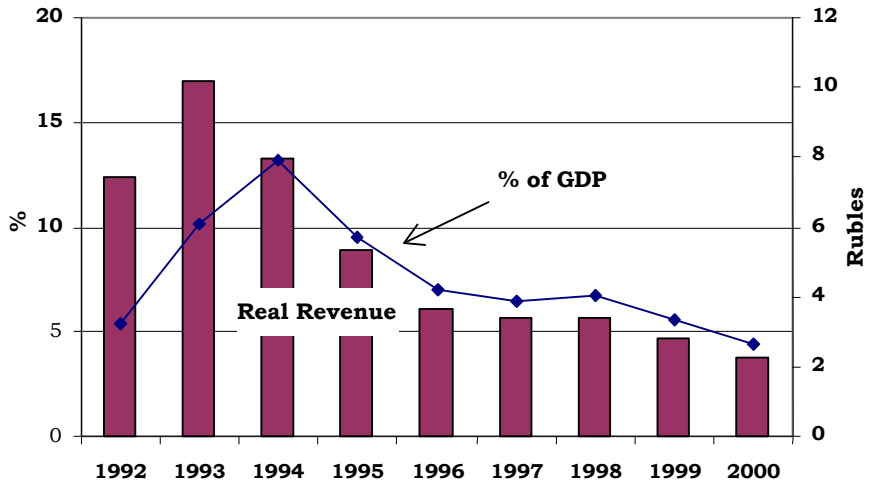
The annual revenue from the enterprise profit tax (to the consolidated budget) expressed as a percentage of GDP shrank from 13.2 percent in 1994 to 4.4 percent in 2000, or threefold in real terms (Figure 12).

[28] See "Cyclical Dynamics of the Demonetized Sector" in this volume.

At the same time, the corporate profit tax rate remained unchanged - at 30 percent. There are several reasons for this drop, such as declining profitability of enterprises, increased tax arrears, and the introduction of tax privileges for some enterprises. The most important, perhaps, is the learning process of the enterprises that over time have "improved" their accounting skills in order to keep their listed profits at a low level or remain officially in the red. Lack of financial transparency helps and barter becomes a useful tool in this strategy.

Figure 12

Real budget revenues from enterprise profit tax, billions of constant 1990 rubles, and percent of GDP, 1992–2000



Note: We define here "Real Revenue" as budget revenue expressed in constant 1990 rubles and computed using estimates of real GDP expressed in 1990 rubles presented in Trends (March 2001).

Source: Harvard/CASE database

The slow progress in enterprise privatization is another important factor. Many large enterprises are still owned by the state. The state also maintains control shares in many semi-privatized enterprises and is involved, one way or another, in managing even those formally private. The finances of a half of all Ukrainian enterprises are managed by state tax authorities under the *Kartoteka #2* regime. Almost all privatized enterprises are insider owned and enjoy the safety of closed-stock status.

Different models of corporate control have been used in different countries at different times,[29] such as:

- Soviet Communist Party's oversight of enterprises
- U.S.-type stock exchange monitoring of the performance of firms and equity market pressures (real or potential threat of takeovers)
- Japanese *zaibatsu* and *kieretsu* industrial conglomerates
- German-type "corporate democracy" (workers "co-determination") combined with a close supervision by creditor-banks
- Yugoslav and Polish workers management models

Still other forms of corporate control are practiced.

None of these mechanisms, however, operates in Ukraine. Property rights are weak. The central and local bureaucracy is strong and closely interwoven, and cooperating, with enterprise managers.

A good illustration of the problem is the amount the Ukrainian state receives as the dividend. During the first half of 2000 it was UAH 116 million, or 0.2 percent of total consolidated budget income. Given the size of the state sector, this is a tiny amount. Since official enterprise profits are small (and shrinking) and capital investment into the economy remains very low,[30] the high living standards of most enterprise managers suggest that something must be going on, something not documented in the official transactions.[31]

What we observe is a kind of managerial take-over of the economy. This Ukrainian-style managerial revolution leads to a corporate governance model, in which the managers (predominantly former Soviet *nomenklatura* members) possess almost unchallenged control over the enterprise, no matter whether or not they are its formal owners (or co-owners). As long as local authorities and tax inspectors cooperate, managers are free to extract large rents through "tunneling" (Korenyok, 2000; and Fonkich, 2000a and 2000b). Barter is used as an important vehicle for this tunneling.

Since, in many cases, the activities are hidden, it is difficult to provide convincing macroeconomic evidence for the occurrence of the tunneling. Nevertheless, aggregate amortization/taxes/profits figures are suggestive of some kind of manipulations. There is also some analytic work that documents tunneling activities at the microeconomic level (Korenyok, 2000; and Fonkich, 2000a).

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[29] Discussion of different corporate control system can be found in numerous studies of comparative economics; see for example Gregory and Stuart (1995).

[30] Gross capital formation is about 10 percent of GDP, probably below the effective capital depreciation level.

[31] Barter Factory from our CASE STUDY is a good example.

4. An example of a barter deal

Korenyok (2000) has studied and documented instances of barter deals conducted in the late 1990s. Four out of five of Korenyok's cases involved a local government in an explicit or implicit way. In three cases a budgetary organization participated in the deal. In one case a coal mine was involved, which can be treated as a semi-budgetary unit since the coal industry is heavily subsidized. We have selected the last case (involving the coal mine) in order to illustrate tunneling enabled by some (quite sophisticated) barter operations.

Seven participants are involved:

1. Coal Mine
2. Coal-Processing Factory
3. Metallurgical Factory
4. Metal Seller, associated with the Metallurgical Factory
5. Machinery Factory
6. Fictitious Firm[32]
7. Financial Company[33]

It is a multilateral barter scheme, in which goods and *veksels*[34] circulate among the participants. Money appears only at the end of this scheme, when side payments to management of the participants are made.

During Stage One of the deal **coal** deliveries are made:

Coal =>	Coal Processing =>	Metallurgical
Mine	Factory	Factory

At Stage Two, an output from the Metallurgical Factory - some **metal** - is delivered:

Metallurgical =>	Metal =>	Fictitious =>	Machinery
Factory	Seller	Firm	Factory

At Stage Three, the Machinery Factory sells some **machinery** to the Coal Mine:

Machinery =>	Coal
Factory	Mine

[32] Firm created by Financial Company for a specific period.

[33] The Financial Company did not participate directly in the purchase/sale transactions.

[34] The main difference between *veksels* and their foreign relatives – promissory notes – is that payments on these debt instruments in Ukraine and other CIS countries are made in kind, i.e., *veksels* are redeemed with goods rather than with cash.

At Stage Four, payments for all these deliveries are processed.[35] But, instead of money, all participants of the Deal used a ***veksel***, which is issued by the Coal Mine as payment for the machinery it acquired:

Coal Mine	=> Machinery Factory	=> Fictitious Firm	=> Metal Seller	=> Metallurgical Factory	=> Coal -Process. Factory	=> Coal Mine

There is also a Stage Five in this Deal. In the whole procedure a crucial role belongs to the Fictitious Firm. This firm delivers to the Machinery Factory only a portion of metal it purchases from the Metal Seller. It charges for it a price that is three times higher than the one charged by the Metal Seller. During the entire deal, the nominal invoices in each sale/purchase transaction remain the same, say for UAH 100. The Fictitious Firm delivers only one third of the amount of metal involved in this deal and is reimbursed only for the effective delivery, since it is "paid" by the Machinery Factory with the Coal Mine's *veksel*, to which an appropriate discount rate is applied (67 percent in this case). Thus, while the official "face value" in all these transactions remains the same, there occurs a leak. This leak is channeled through the Fictitious Firm. Two thirds of the amount of metal delivered by the Metallurgical factory is sold at the "cash" market and the cash is pocketed by all the managers and officials involved in the Deal.

Five comments are needed. First, this description of the Deal is a slightly simplified version of the Korenyok's (2000) "Deal #4," who claims that for his analysis he used the information about real-world cases, which had been made accessible to him. In our description of this particular deal we use of course purely hypothetical numbers.

Second, by presenting description of this Deal, we do not imply that all barter transactions be corrupted. Such an assertion lacks evidence and would be unfair. The occurrence of corruption is neither necessary nor sufficient condition for occurrence of a barter transaction. There is, however, overwhelming evidence that the corrupted operations do happen. Corruption is stimulated/enabled by the nontransparent nature of non-monetary operations. In particular, the possibility of making payments with the *veksels* at significantly discounted values contributes to the obscurity of barter transactions. At one moment or another, the track of the differences between the face price and the market price of the *veksels* is lost and some value channeling can happen.

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[35] It should be noted that at the first three stages there are no financial settlements among parties of the Deal, simply the goods are delivered without being actually paid for. Therefore, Stage Four could be viewed as a chain of settlements between parties.

Third, the additional income extracted from this kind of deals goes to the managers of the enterprises involved in these deals and often to some bureaucrats who "secure" the entire operation by providing a so-called *krysha*, i.e., the roof, to protect the participants of the deals. The workers, the budget, and outside owners (especially the state in the case of state owned enterprises) do not get any share from the income channeled away in the barter operation. In the above deal, according to Korenyok, managers of the Coal Mine got the largest chunk of this extra income.

Fourth, typically, a fictitious firm is used to hide the money earned as a result of these transactions. On the one hand, this firm is virtual and exists only on paper; on the other hand, the money it generates is real. These kinds of firms are an important component of an emerging virtual economy, Gaddy and Ickes (1998a, 1998b, and 2001) write about.

Fifth, in the above deal and three others, studied by Korenyok, an additional barter intermediary (the Financial Company) always participates. The role of this intermediary is to find partners in the deals and, thus, to facilitate the non-monetary transactions. The need for this intermediary indicates that the whole operation is much more complex than conventional barter as defined by a straightforward direct exchange of goods and services between two participants of a transaction. In the Deal described above, the entire process is multilateral, not bilateral. It is highly nontransparent. Yet, its transaction costs are not as high as economics textbooks anticipate. The costs are kept at a low level because of the participation of a highly specialized transaction facilitator (the Financial Company) and the opportunity for significant scale economies; the larger the sale contract the lower the average transaction cost of the barter deal (Guriev and Kvasov, 1999).[36]

5. Statistical analysis of a large data set

In our analysis, we have used two 1998 data sets.[37] The first includes data on barter and consists of 2060 observations. The data have regional and industrial division: 27 regions (25 *oblasts*, the city of Kyiv, and the city of Sevastopol). The number of manufacturing industries for each region varies from 44 (for Sevastopol) to 91 (for the Kharkiv *oblast*). Geographically, the largest share of barter was in the Rivne *oblast* (64 percent of total sales) and the lowest share of barter was in Kyiv (10 percent of total sales). For the entire Ukraine, the most

[36] It was demonstrated that the size of the firm (which is supposed to reflect the volume of sales) be positively correlated with the share of barter (Maurel and Brana, 1999).

[37] Source: Harvard/CASE database.

heavily bartering industry is Sugar Industry, with barter transactions constituting 78 percent of total sales. The Shipbuilding is the least involved in barter trade (only 3 percent of its total sales).

The second data set covers data aggregated from mandatory reports submitted by enterprises to the regional branches of the State Statistics Committee. The reporting forms include balance sheets, financial statements and assets statements. The total number of variables exceeds 200. While this data set has the same subdivision by regions and industries, the number of observations is smaller since it includes only basic manufacturing industries.

Merging the two data sets generated a new one of 465 observations, with the same structure but smaller number of industries in each region. Summary statistics for the barter variable are shown in Table 2.

Table 2

Barter, the 1998 data set, percent of total annual sales, 1998

	Mean	Minimum	Maximum	Std.Dev.
Barter, n=465	38.2	0.00	98.22	26.05

Initially, we constructed a large square correlation matrix for all variables included in the data set (all those included in the reporting forms). The results showed that barter belonged to a small number of variables that do not significantly correlate with other variables. Its average correlation coefficient was one of the lowest in the entire data set. This possibly confirms an "intangible" nature of barter, which is not easily explained by (is not strongly interrelated with) other economic variables, since it is driven by predominantly non-economic, quite idiosyncratic factors. These factors may be different kinds of individual contacts, deals, arrangements, etc., which are not reflected by the variables included in our data set.[38]

Next, we investigated relationships between barter and selected economic variables of potential importance to barter (Table 3).

[38] Obviously one can argue that the above happens due to a poor quality of data. Data quality is clearly a well-known problem, especially in the countries in transition. However, the fact is that this particular data set did show the expected relationships for many variables. This strengthens our confidence in the data.

Table 3

Correlation coefficients of barter and selected economic variables

Indicator	Correlation coefficient
Cash on accounts	-0.31
Profits of the reporting period	-0.23
Short-term bank credits and other loans	-0.12
Long-term bank credits, and other long-term liabilities	+0.12
Labor costs	+0.15
Overdue receivables for goods and services	+0.15
Overdue payables for goods and services	+0.21
Losses in previous years	+0.22
Inventories	+0.23
Wage arrears	+0.25
Losses of the reporting period	+0.30
Number of loss-making enterprises	+0.37
Overdue payables to the budget	+0.47

The enterprises involved in barter follow the expected pattern:

- They experience problems with cash flow: negative correlation with Cash on accounts, Short-term credits, and Profits; positive correlation with Losses, Number of loss-makers, Inventories, Overdue payables, and Overdue receivables.
- They are labor "protectors": positive correlation with both Labor costs and Wage arrears.
- They remain nevertheless in good shape – they invest: positive correlation with Long-term credits.

Of course, the above findings are far from being conclusive. The evidence is "soft." Most correlation coefficients are low (although all of them are significant). Only the coefficients for "Cash on accounts," "Number of loss-making enterprises," and "Overdue payables to the budget" exceed 0.4.

In all our correlation calculations, barter was consistently and strongly correlated with an industrial sector division. Basically the industries that produce raw materials and intermediate goods use barter more than those oriented toward final consumers: such industries as Cement, Glass, Construction Materials, etc., are involved in barter much more than, for example, Food and Metals, since the latter industries deliver most of its output to final consumers - households and exports, respectively (Table 4).

Table 4

Industries with the lowest (left column) and highest (right column) shares of barter in total sales

Industry	%	Industry	%
Shipbuilding	2.8	Sugar	78.1
Bakery	4.4	Cement	76.0
Alcohol	9.3	China	67.7
Brewery	10.3	Mining Machinery	67.5
Printing	10.5	Tractors	63.8
Tobacco	11.7	Wall Materials	63.4
Meat	12.4	Glass	61.3
Liqueur and Vodka	12.4	Construction Materials	61.1
Non-ferrous Metals	17.1	Cotton and paper	58.6
Microbiology	17.9	Wood	58.1

We also used a consumer good index (CGI), first employed by Guriev and Kvasov (1999), as an indicator of industry closeness to the final consumer. CGI equals 1, when the industry predominantly produces consumer goods; and 0, otherwise (i.e., when it mainly produces intermediate goods). Correlation coefficients between barter and CGI were consistently negative, for Ukraine as a whole (-0.56) and for each of its regions. There seem to be several reasons for this phenomenon, such as:

- Heavy industry and agriculture are less privatized and less restructured than consumer-oriented industries of the economy.
- Barter deals involve large fixed transaction costs; economies of scale support large contracts, which are less frequent in the case of producer goods.
- Large standard mass products, such as electricity,[39] gas, oil, grain, cement, etc., are more liquid than highly diversified consumer goods; therefore, can be conveniently used as money substitute.

[39] The relatively low barter activity of the Power Industry in 2000 reflects recent reforms undertaken in this sector by the Yushchenko government. On June 22, 2000 the Parliament adopted the law initiated by the government on Amendments to the Law of Ukraine on Electricity. This law stipulates for (1) only cash payments for power, (2) creation of special accounts of retail power suppliers into which consumers make payments. Money from these accounts cannot be used for other purposes than payments to power generating companies and other wholesale power suppliers. The significant decline of barter in this industry during the year 2000 (from 47.9 percent in 1998 to 18.6 percent in 2000) seems to provide support for the importance of policy in reducing barter transactions. A consistent change in policy brings about radical changes in the barter pattern. Any more definite conclusions should not be drawn, however, until a thorough analysis of data indicating how this radical shift is made.

- Individual consumers and buyers of Ukrainian exports, as a rule, do not gain much from the nontransparent nature of barter, thus, in these transactions cash is more often used; in the sale of mass producer goods, both sellers and buyers may be interested in a deal behind the closed door (after all, "you need two to tango").

6. Barter and perfect competition

The neoclassical model of perfect competition involves several powerful assumptions, including those of an absence of time and space (economic activities and equilibrium adjustments occur instantaneously; no transportation costs are incurred), a large number of firms, no entry and exit barriers for market participants, perfect information, homogeneous product, zero profits (absence of monopolistic rents), and zero transaction costs. In this model no problems with financial liquidity and access to trade credit occur. Actors have full access to funds and payments are made instantaneously. Contract enforcement is perfect. No arrears occur.

The twenty first century's world is equipped with great data processing and storage capacities, Internet and other powerful communication devices. It, thus, comes closer than ever before to satisfy many of the perfect competition model's requirements. The new communication and information processing capacities help supply and demand meet and bring prices to a unique market-clearing equilibrium level; in many cases these capacities help reduce business start-up costs and abate other entry barriers. Business contacts, price information and price adjustments occur almost instantaneously thanks to easy communication among a very large number of market participants. Technological progress reduces transportation costs. The development of the world financial system, the use of international accounting and banking standards, currency convertibility, fast access to international banking networks, etc. help the whole world evolve toward the arrangements specified in the perfect competition model.[40]

Access to information plays a crucial role in this emerging global economic system. A condition for its smooth and efficient operation is easy access to reliable data on economic performance of countries, regions, and companies, including transparent standard financial and accounting statistics, and international credit and investment ratings.

[40] Interestingly, even the creators of this model, decades ago, viewed it as a purely theoretical concept that is impossible to implement in real world.

It seems an unfortunate paradox that during the last decade many FSU countries appear to be moving in the opposite direction. Barter greatly contributed to this differentiation. There has been a gradual increase in the "distance" between the FSU and the rest of the world – in GDP, people's income, level of technological development, etc. (Sachs, 2000). Currently the dollar GDP level of Ukraine and many other FSU countries remains in the vicinity of an average level of Africa; is lower than that for China and many Southern Asian countries; and is even several times lower than the average level for Latin America. The prevalence of barter impedes market formation, as noted above, and is a factor in this differentiation. In particular, barter:

- obscures information
- enables producers to affect prices
- opens the door to price discrimination (differential pricing for the same product)
- inhibits newcomers (it is very difficult to enter a market fully controlled by barter dealers)
- obstructs easy exit by enabling/supporting the existence of loss-making enterprises
- increases market segmentation and cartelization
- reduces product homogeneity, i.e., tends to artificially diversify products (each barter deal concerns a specific product being exchanged and does not cover any other products)
- enables high profit (rents)
- often increases transaction costs
- barter as a rule lengthens the time necessary for closing deals and slows down the circulation of goods in an economy
- and so on

Economists claim that the high growth, low inflation, low unemployment, and high incomes of the US economy during the last decade are, to some degree, the effect of the emergence of this. Internet-based open "new economy" (Economist, 2000). We argue that the low growth (or steep decline), high inflation, high real unemployment, low incomes, and rapid pauperization and decapitalization of the Ukrainian economy is to a significant extent the result of barter and barter-type transactions that confuse incentives (motivation of economic actors) in business and obscure information. The Ukrainian economy has failed to open up both internally and externally and remains highly segmented and nontransparent. A lot of responsibility for this situation falls on country's weak market institutions and weak economic policies. Barter economy is not

compatible with an efficient competitive market. While barter hampers the development of the competitive market, promoting market competition hampers barter (Guriev and Kvasov, 1999).

7. Barter and liquidity

The lack of interest in barter in mainstream economics creates a situation where there is little theory to back up this form of exchange. Economists argue that barter is inefficient because of its use of goods rather than money for making payments. Money is supposed to be the most liquid asset, which involves the lowest transaction costs – it is easier to exchange money for other goods than any other (less liquid) asset. In transition economies, however, money is not always the most liquid, meaning, the monetary payments may involve higher effective transaction costs, and more time and effort, than payments with other (financial and non-financial) assets. Given all the constraints and impediments the enterprises struggle with, barter may be a cheaper way of doing business than cash payments. Paradoxically cash deposited in official bank accounts may be much less liquid than some goods used in barter deals, especially those goods that are relatively easy to sell.[41] Thus, in some situations, barter may lower transaction costs, making the economy more liquid, and, most important, allowing business transactions to take place.

Forbidding barter by administrative means will not help. Only broad institutional reforms and improvements in policies can make money truly liquid and bring about a withering away of barter. Similarly, the shadow economy cannot be eradicated by measures aimed at its reduction without the necessary reforms of the whole economy and changes in current policies. It is not barter that is the main problem in economies such as Ukraine's, but rather the policies that effectively support barter, nonpayments, shadow, etc.

Concluding remarks

Why barter? A series of related causes suggest themselves:

1. In the early 1990s barter in Ukraine was simply a continuation of the operation of enterprises under the Soviet central planning. It was often an "implicit" barter in the sense that it was considered a

[41] Managers often face significant difficulties in using their cash balances. Access to money may be difficult and expensive, if possible at all. It may involve many bureaucratic formalities, documents, permits, restrictions, and often even bribe payments. Under such circumstances payments with goods, may provide the producer with more flexibility and liquidity than payments with cash deposited ~~on~~in a bank account.

standard exchange operation in which prices were calculated based on costs and the state provided subsidies when it decided it was appropriate.

2. By the mid-1990s barter became "explicit." Various monetary and banking restrictions constrained the access of enterprises to cash and explicit non-monetary transactions became necessary in order to sell and buy.
3. The emergence of an incomplete-market environment enabled many enterprises to use barter in order to protect their revenues from monetary losses and to manipulate prices to their advantage. From an inefficient operation characterized by a "double-coincidence of wants," barter turned into a Pareto-efficient transaction in which the buyer and seller agree on a most profitable deal. Yet this microeconomic efficiency, most of the time, did not coincide with macroeconomic efficiency for the whole national economy. Large dead-weight losses occurred and hampered economic growth of the Ukrainian economy.
4. At its most sophisticated level, barter began to be used by individuals as a means for hiding and distorting information for personal gain. In most cases enterprise managers and corrupt bureaucrats were winners while everybody else (state, outside owners of companies, workers, business partners, etc.) were losers.

The time factor plays a very important role here. The standard argument about the high transaction cost of barter because of need for double-coincidence of wants became increasingly obsolete. On the one hand, various new institutions and companies have been set up and developed that specialize in complex barter operations and were able to bring the transactions cost to a relatively low level. Economies of scale were helpful. On the other hand, the main cost to the economy is virtuality, which barter uses and promotes. Barter emerges as an information "spoiler," as a black-hole-type institution that absorbs a lot of information but delivers very little. Those who continue looking at barter predominantly in terms of its high transaction costs and its cash-shortage context miss very important aspects of barter. Information distortion seems to be the key cause and also the troubling effect of barter today.

While we tend to agree with Thirsk (2000) that barter is used as an instrument to cover large debt, we would argue that there is plenty of evidence, including case studies (Korenyok, 2000), survey data, and even data on growing income inequality in Ukraine (which may be used as circumstantial evidence in this case) that barter goes far beyond a simple debt/arrears problem. Thirsk rejects the "conspiratorial pretense" of Gaddy and Ickes' (1998) virtual economy.

"…[Wage] and tax arrears, barter and mutua` l settlements are all symptoms of the same underlying cause: weak supply adjustments to conditions of non-profitability or the inability of weak market structures to impose hard budget constraints on producers who are unable to pay for their inputs out of cash sales." It seems that originally barter was often resorted to as a necessity – a means to struggle with the lack of cash and to handle debt. At a later stage, managers learned the opportunity provided by barter, related to its nontransparency and turned nontransparency to their advantage. Viewing barter as just a response to a problem of "supply adjustments" seems to neglect many other important aspects of this trade arrangement.

The focus of reforming decision-makers should not be barter itself (or other non-monetary transactions) but rather the fundamental institutional roots of this phenomenon and policies supporting its occurrence. Barter operation on such a large scale could not be possible in a strong market economy, in which the "rules of the game" support profit maximization instead of rent seeking (Snelbecker and Novoseletsky, 2000). Barter is an operation that enables collecting returns to the "investment in weak institutions." The investors are transition "winners," who often claim to be true reformers, while, in fact, they manipulate the only-partially restructured environment to take advantage of the opportunities provided by unfinished reforms, weak institutions and inconsistent policies (Hellmen, 1998).

Solution to the barter problem does not lie in the provision of more liquidity in the form of money emission or cheap credits or imposition of administrative ban on this type of transactions but rather in the implementation of reforms to strengthen the market. And, at the end, to avoid any confusion often sparked by the word "market," we must emphasize that obviously no strong market is possible without a strong, competent and effective government.

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Notes to Appendix:

* Highlighted are the references in which micro-data are used (either survey data or official statistics, or both).

** The hypothesis of monopoly power mentioned in other two papers of Sergei Guriev are not marked with symbol ¦ in the table.

		Weak Policy			Weak Banking			Weak Market**			Weak Governance		
APPENDIX: **Literature and hypotheses of barter causes***	Data	High tax rates	Ineffective bankruptcy	Soft budget constraint	Lack of working capital	Lack of credits/high credit rates	Kartoteka #2	Market power	Disorgani-zation	Non-cash environment	Tax evasion	Virtual economy	Principal-agent /Rent seeking
Auktsionek (1997)	1994-95	¦			¦								
Gallagher (1996)	1995		¦										
Maurel & Brana (1999)	1995-96		¦	¦	¦	¦							
Guriev & Ickes (1999b)	1996-97	¦					¦						
Guriev & Kvasov (1999)	1996-97							¦**					
Marin, et al. (2000)	1997				¦	¦							
Van Atta et al. (1998)	1997		¦		¦		¦						
Marin & Schnitzer (1999)	1997								¦				
Guriev & Ickes (1999a)	1996-98		¦										
Shchur & Zhylyaev (1999)	1997-98						¦						
Commander & Mumssen (1998)	1997-98		¦		¦				¦		¦		
Berezovskaya (1998)	1998	¦			¦								
Gaddy & Ickes (1998b)	1998		¦										
Hendley et al. (1998)	1998		¦	¦									
Snelbecker et al. (1998)	1998									¦			
World Bank (1998)	1998										¦		
Maskalevich (1998)	1998						¦						¦
Gaddy & Ickes (1998a)	1998											¦	¦
Korenyok (2000)	1997-99												¦
Carlin et al. (1999)	1999				¦	¦		¦			¦		
Szyrmer (2000a)	2000											¦	¦
Dubrovskiy (2000a)	2000												¦
Fonkich (2000)	2000												¦
Thirsk (2000)	2000		¦										
TOTAL		**3**	**8**	**2**	**7**	**3**	**4**	**2***	**2**	**1**	**3**	**2**	**7**

The Fundamental Macroeconomic Cause of Barter and Arrears in Post-Soviet Economies

David Snelbecker

Introduction

Barter and arrears in post-Soviet economies result fundamentally from non-market prices that are set above what would be market levels, enabled by soft budget constraints on enterprises and government. A combination of soft budget constraints, tight monetary policy, and stickiness in pricing causes many nominal prices in the economy to be maintained at an artificially high level. Barter and arrears are ways to manipulate prices and dispose of the resulting surplus goods.

In this paper, I expand on this theoretical explanation for the extensive growth of barter, other non-cash payment mechanisms, and arrears in post-Soviet economies. It should be underscored that this analysis is preliminary. It provides a conceptual framework for future empirical research.

Throughout, I use the term "barter" broadly to encompass not only in-kind trade of goods but also promissory notes (*veksels*), mutual offsets, and other forms of non-monetary payments.[1]

1. Overview of barter, other non-cash payments, and arrears in Ukraine

Over the last ten years, the economy of Ukraine has evolved through three distinct phases:

- The Soviet period was characterized by chronic shortages of goods.

[1] See "Cyclical Dynamics of the Demonetized Sector" in this volume.

- The early years after independence were characterized by hyperinflation.
- The last several years have seen a considerable growth of arrears, barter, and other non-monetary forms of payment.

In this third phase, rather than paying for goods and services in money, enterprises and Government increasingly either have not paid at all (in which case arrears accrue) or have paid in kind. Sometimes such in-kind transactions take the form of simple exchange of goods; but they can be surprisingly complicated, involving long chains of participants who engage in mutual cancellations of debts, discounted trading of promissory notes, and other instruments.

2. "Good" barter vs. "bad" barter

For the purpose of conceptual clarity, I differentiate between several types of barter, which I will divide into "good" barter and "bad" barter. By **good barter**, I mostly mean that barter which involves enterprises in some type of borrowing from suppliers and creditors, rather than from banks, due to the low level of development of the banking system. For instance, instead of seeking trade credits from banks, enterprises may issue *veksels*, which are traded at a discount, in lieu of payment for goods. In many economies with poorly developed financial sectors (and consequently high interest rates), barter operations, arrears, and various forms of promissory notes are quite common. By increasing liquidity, the prevalence of such sophisticated extra-bank credit methods makes the economy more efficient than it would otherwise be. To the extent that barter occurs in Ukraine in response to inadequacies in the banking sector, it should be considered a positive phenomenon rather than a problem about which policymakers should worry. Because such transactions increase efficiency in the economy, I would tend to classify in-kind transactions that merely provide market liquidity to enterprises as good barter.

On the other hand, the extreme level of barter, arrears, and other non-monetary payment in Ukraine's economy suggests that far more is happening than just extra-bank liquidity. Many of the effects of these transactions are clearly negative. Often, barter and other non-monetary transactions encourage the survival of "value-subtracting" enterprises that produce goods no one wants to buy for money. This leads to inefficient allocation of resources and distortions in market price signaling. Such barter creates conditions for tax evasion and corruption, and leads to a general demonetization and lack of transparency in the economy. The wide prevalence of barter and arrears in Ukraine is a principal reason

why the economy has contracted to a very low level. The types of transactions that are fundamental causes of Ukraine's economic malaise I will classify as **bad barter**.

This categorization of economic activity into good and bad barter is rather crude; and it would be difficult, using available data, to classify barter transactions into these two categories. Nevertheless, this categorization helps clarify our thinking. Although it is true that one cause of barter in Ukraine's economy is the lack of availability of credits from the formal financial sector, this type of barter is good in a way; this aspect of barter is not the most significant problem for the economy. I have, therefore, chosen to focus our analysis largely on bad barter, in an effort to identify its causes and propose further empirical research.

3. The search for causes: three working hypotheses

To orient our search for the causes of barter, arrears, and other non-monetary types of payments, I start with a few intuitive hypotheses about the nature of these economic phenomena:

First intuitive hypothesis: The fundamental causes of barter are macro, not micro. Many have looked for the causes of barter at the micro level — that is, at the level of the enterprise. Lack of privatization, ineffective corporate governance, corruption, and weakness in contract enforcement are all examples of hypotheses commonly put forward that could be called "micro." For several reasons, however, I suggest that the causes of barter are probably "macro." Note that the level of barter and other such transactions across the economy has gone up and down quite dramatically over the last several years, while many micro characteristics of the economy, such as corporate governance structure and contract enforcement regimes, have changed little. Furthermore, note that, if one were to compare two similar enterprises in, say, Ukraine and a neighboring Central European country, in similar industries, with similar corporate governance structures, one would probably find that the enterprise in Ukraine engages in barter far more often than its counterpart in Central Europe.[2] This suggests that the reasons for barter most likely can be found in some general characteristics of the economy, rather than in factors at the enterprise level. Such macro characteristics might include tax policy, financial sector regulations, price and monetary policy, level of competition, etc.

Second intuitive hypothesis: Of all the possible hypotheses to explain barter, only one or two are truly important. Particularly, if barter is caused by specific macro factors, it seems likely that only one or two

[2] See "Transactions in Transition: To Barter or Not to Barter?" in this volume.

factors are of prime importance, while all the others are ancillary. Our task, therefore, is to determine which of the many hypotheses that have been put forward to explain barter are the most significant.

Third intuitive hypothesis: The causes of barter can be found in characteristics of the economy that date back to Soviet times, and which have somehow evolved since then. Barter, arrears, and other non-monetary payments are probably due to some failure of the economy to transform itself successfully into a market system. It is important to identify the key factors that characterized the Soviet system and to try to determine the extent to which these factors still shape economic behavior, albeit in some new form. Specifically, the Soviet-period characteristics of soft budget constraints and non-market prices merit attention.

I have not assumed the truth of these hypotheses in our quantitative analyses. Rather, I simply use them to give direction to our research.

4. A theoretical model of barter

Let us restate the theory I propose to explain what I have defined above as bad barter:

Barter and arrears in post-Soviet economies result fundamentally from non-market prices that are set above what would be market levels, enabled by soft budget constraints on enterprises and government. A combination of soft budget constraints, tight monetary policy, and stickiness in pricing causes many nominal prices in the economy to be maintained at an artificially high level. Barter and arrears are ways to manipulate prices and dispose of the resulting surplus goods.

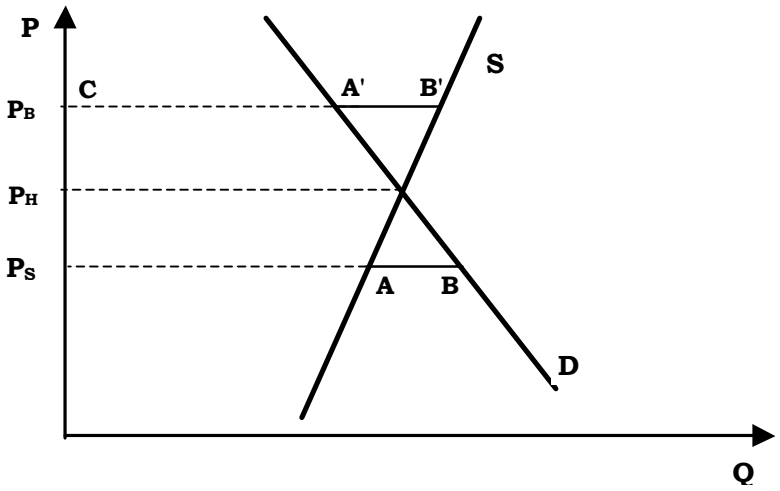
Types of economies

Looking more closely at the three phases of recent Ukrainian history (which parallel closely the Russian experience), which are depicted in Figure 1, which shows the quantities supplied and demanded at various prices, one can see that **the shortage economy** of the Soviet period was characterized by non-market prices set below market level. The economy in Soviet period was characterized by the controlled prices (P_S), which were set below the market price (P_H). Shortage results, equal to *AB*. Economic activity in the shortage economy is enabled by subsidies and soft budget constraints, which allow enterprises to continue producing even when they have difficulty finding inputs to purchase at controlled prices and when the controlled prices at which they are required to sell their output are below the costs of production. In such an economy, the shortages constitute an implicit tax on households. Although prices are

nominally stable, one could estimate the level of prices that would result if prices were freed, thereby determining a true inflation rate, which would be higher than the nominal "repressed" level.

Figure 1

Shortage, hyperinflation and barter/arrears economies



The hyperinflationary economy looks like a stable economy (in terms of static analysis, at one moment in time). Nonetheless, the hyperinflationary economy has important similarities to the shortage economy. Subsidies are directly provided to enterprises as transfers from the government, funded by the printing presses. Moreover, credits lent at nominal interest rates – often below the inflation rate – constitute hidden subsidies. Therefore, as in the shortage economy, the hyperinflationary economy is characterized by soft budget constraints and subsidies. Also, printing money represents an implicit tax on consumers, similar to the shortages of the Soviet period. The constant rapid changes in the overall price level *(P_H).* introduces considerable noise in relative prices. In a sense, the whole economy suffers from "sliding" prices. An enterprise, household, or government can arbitrarily adjust the real price it pays for a good or service simply by delaying payment. The longer a payment is delayed, the lower the real price becomes.

The barter/arrears economy is similar to the shortage economy, except that the non-market prices are above rather than below market level. Because the nominal price is set above the market price, enterprises produce quantity *CB'* of goods, but demand for these goods is only *CA',* so a surplus of *A'B'* occurs. Since no one is willing to pay price P_B for this surplus, the enterprise either engages in some form of barter or effectively gives the goods away, accruing

arrears. Barter and other non-monetary forms of payment allow the enterprise to "sell" its goods for nominally high prices even if the market value of goods it receives is far below the nominal value. Two enterprises might both have over-priced goods, which they trade between themselves (claiming sales at nominally high prices) and which they then turn into cash at lower values. Or a good might be sold at a nominal price, for which an enterprise receives *veksels*, and these are later sold for cash at some discounted rate. Barter and other non-monetary forms of payment therefore are principal means through which enterprises ratchet down the artificially high nominal prices of their goods. Arrears also can be a means of accomplishing the same end if, for instance, part of an order of goods is paid for in money and the rest is simply not paid – i.e., with arrears accruing that are never paid off. Some portion of the surplus goods might be demanded at a somewhat lower price, which could be obtained through various barter operations, whereas another portion of the surplus might have a price close to or simply equal zero if this portion is given away through accrual of arrears.

The barter/arrears economy, with its non-market prices and soft-budget constraints, is similar in many characteristics to the shortage and hyperinflationary economies. Soft budget constraints in the barter/arrears economy allow enterprises to continue producing goods even when artificially high prices lead to surpluses that no one wants to buy for money. In the Soviet economy, prices were controlled officially and shortages represented an implicit tax on consumers. In the barter/arrears economy, prices again are non-market prices. An enterprise might agree to a price for a good and then either not pay it (arrears) or pay in kind with another good (barter). In both cases, the prices are not market prices, since they do not represent the price, which customers are actually willing to pay in money. Barter and arrears also represent a hidden tax on the population, since enterprise employees are promised one wage but, because they are either not paid or paid in kind with goods whose market price is lower than the nominal price, they receive a wage lower than promised. Although many prices in the economy, particularly at the consumer level, are legitimate market prices, actually paid in money, the presence of so much non-market pricing in Ukraine's economy today causes substantial distortions and lack of transparency in the allocation of society's resources.

All three periods involved either high inflation or repressed inflation. In the Soviet period, repressed inflation could be defined conceptually as the inflation level that would have resulted if prices were freed. In the current barter/arrears period, repressed inflation could be defined as the inflation level that would result if enough money were printed to cover the difference between market and nominal prices of bartered goods and services plus the nominal prices of outstanding overdue arrears.

Repressed inflation and deflation

By thinking about barter and arrears in this way, I see that these phenomena, at the macro level, could be considered repressed inflation. At the micro level, however, by seeing barter and arrears as resulting from stickiness in prices, in which prices do not fall to their market levels, I could characterize these non-monetary forms of transactions as repressed deflation.

The hyperinflationary and barter/arrears economy only differ in how the implicit tax is collected. In the first case, people are taxed indirectly: the value of money that they hold is eroded because money is printed to cover excess consumption. In the barter/arrears economy, households are paying an implicit tax because of delays in wage payments and wages paid in kind. This economy suffers from excess consumption as in the hyperinflationary economy, only it is financed through a different mechanism. Because of this, the current so-called stabilization of the economy of Ukraine constitutes no significant progress from the hyperinflation and shortage economies it replaced.

Why are nominal prices in the barter/arrears economy higher than market prices? There are three root problems.

- The economy of Ukraine still consists of many old socialist enterprises that are producing goods that cost more to make than they are worth on the market — i.e., value-subtracting production enabled by soft budget constraints. If the enterprises were subject to hard budget constraints, they would be forced to reduce their prices to market levels. Since market levels would be below costs of production, they would eventually cease production of such value-subtracting goods and/or undergo restructuring. Soft budget constraints make it possible for them to postpone restructuring.

- The inflation rate is low due to tight monetary policy. This is a fundamental change from the hyperinflationary period. In that earlier period, high inflation allowed real prices to adjust downward, since one could simply delay payment in order to reduce real prices. Enterprises could maintain the fiction of profitability by selling goods at nominal prices higher than nominal input costs while at the same time delaying the moment of payment of their output until the real price of output was below real input costs. The elimination of high inflation made it impossible to reduce real prices by delaying payment.

- Nominal prices exhibit stickiness, particularly when needed price reductions would make output prices lower than the costs of production. There are several reasons for this stickiness:

- Tax and accounting rules in some cases might require that output prices be set above costs of production (because of policies aimed at reducing corruption and tax evasion).
- Because they lack experience with marketing in a competitive environment, enterprise managers have a natural tendency toward cost-plus pricing of output even if resulting prices do not find buyers on the market.
- Setting output prices above costs might be an important way of signaling to the state that the enterprise is profitable. An enterprise that sells its output below costs sends a clear signal that it is not profitable, while an enterprise that sells at artificially high prices and then engages in barter might be able to claim that it is a profitable enterprise unfortunately forced to work in a difficult economic environment.
- An absence of hard budget constraints removes the main factor that would force enterprises to reduce prices to market levels even if such levels are below the costs of production.

Summing up

In Table 1, I compare the shortage economy, the hyperinflationary economy, and the barter/arrears economy:

Table 1

Comparison of the Shortage, Hyperinflationary, and Barter/Arrears Economies

Category	Shortage economy	Hyperinflationary economy	Barter/arrears economy
Soft budget constraint	Direct subsidies; price controls	Direct subsidies; credits at negative or low real rates	Acceptance of tax and utility arrears and in-kind payment
Non-market prices	Below market levels	"Sliding" in real terms, depending on delay of payment	Above market levels
Distortions	Value-subtracting production; excessive state consumption	Value-subtracting production; excessive state consumption	Value-subtracting production; excessive state consumption
Implicit tax on population	Shortages and lines	Erosion of real value of money	Nonpayment (arrears) and partial payment (barter)

Conclusions

The hypothesis I have put forward in this work is that **barter is caused by macro factors** related to subsidies, soft budget constraints, inflation levels, and stickiness in prices, rather than being caused by micro factors such as corporate governance.

Considerable research and analysis should still be done to understand these problems better, to develop proposals for policy reforms that would address these problems, and to assess the overall impact of such reforms on the economy.

Industrial Production and Finance[1]

Tamara Shygayeva

INTRODUCTION

Ukraine has experienced growth in industrial production since the beginning of 1999. Industrial output grew 4 percent in 1999, and 12 percent during the first nine months of 2000, compared to the same period in the previous year. The most significant growth in 2000 was achieved in the Light Industry, Wood, Food, Metals, and Machinery. At the same time, however, some industries experienced a decline in output, namely, Power, Fuels, and Construction Materials. Although industrial output also grew in 1999, the growth in 2000 was much more significant.

While performance varied from industry to industry, there were some common factors, which influenced industrial production in 2000:

1. Low base for comparison
2. Substantially reformed property relations (privatization)
3. Increased fixed capital investments in 1998 and 1999
4. Devaluation of the hryvnia
5. Increased world oil prices and stabilized domestic oil prices
6. Increase in household real incomes
7. Increased demand for Ukrainian exports
8. Changes in the industrial output structure

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[1] An early version of this chapter was presented at a Harvard/CASE seminar in October 2000. The chapter covers the first three quarters of 2000. For an analysis of the Ukrainian economy for the entire year, see "The Economic Situation in Ukraine: 2000" in this volume. Janusz Szyrmer and Vladimir Dubrovskiy made substantial contributions to this chapter.

The first half of this chapter examines each of these factors in greater detail and analyzes their effect on Ukraine's industrial performance. The second part is devoted to particular aspects of industrial financial performance, namely, profitability and payment discipline. The latter involves the accumulation of mutual arrears between enterprises and their role in providing interest-free credits.

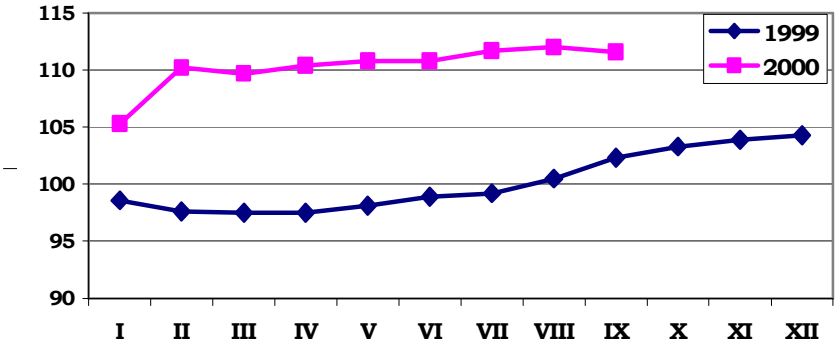
INDUSTRIAL GROWTH FACTORS

1. Low base for comparison

The first half of 1999 provided a favorable base for comparing output, since output at that time declined in all major industries, with the exception of Wood and Food. Not surprisingly, the rate of industrial output growth in 2000 was quite high, especially at the beginning of the year. A slowdown began to show in September, which could possibly have been attributed to a higher base in the corresponding period of 1999.

Figure 1

Industrial output, cumulative, annual growth, percent, monthly, January 1999 – September 2000



Note: Each data point represents a change in industrial output from a specified period in a given year to the same period in the previous year. For example, the change for June 2000 was 111 percent. Thus, in real terms, gross industrial output produced in January–June 2000 exceeded output in January–June 1999 by 11 percent.

Source: Monitoring (September 2000)

2. Substantially reformed property relations (privatization)

The fastest growth seems to have occurred in industries that experienced the greatest advances in institutional and structural reforms. Reforms, and privatization in particular, in Light Industry,

Wood, and Food began earlier than in the rest of the economy and, thus, advanced further than in other industries. In 2000, growth rates in these industries were 2.5-3 times higher than the industrial average. Most of the time, these industries operated without government support. Moreover, government intervention in pricing, sales, etc. were also minimal. While the tangible effects of changes in ownership were not previously noticed, it became evident in 2000 that privatization was finally beginning to pay off. As was expected, market competition encouraged the utilization of advanced technology and an increase in exports.

In industries remaining under substantial state control – such as Oil, Coal, and Power – such encouraging results were absent and output continued to decline. Thus, a significant difference in performance was observed between the most reformed industries and those less reformed. Although the thorough quantitative assessment of the effects of ownership transformations requires further research, it becomes obvious – even from a cursory analysis – that economic performance is a positive function of the extent of privatization: the earlier and more privatized industries perform better.[2]

3. Increased fixed capital investments in 1998 and 1999

The increase in industrial output in 2000 was partly a result of the growth in fixed capital investments in 1998 and 1999 – by 6.1 percent and 2.9 percent respectively. The lion's share of industrial capital investment was in the Metals, Chemicals, Wood, Food and Power industries, most of which grew during the first half of 2000.

Given the weakness of credit and equity markets, self-financing was a dominant form of investment by enterprises. Thus, the slowdown in output decline in 1999 and subsequent growth in the first half of 2000 led to a deceleration in the decline of fixed capital investments in some industries, and to an increase in others. Since investments continued to grow in the first half of 2000, one can expect to see their positive effects in subsequent years.

4. Devaluation of the hryvnia

Increased demand for Ukrainian industrial output was stimulated by the significant 52 percent devaluation of the hryvnia in 1999, and the slow but steady 4 percent devaluation over the first nine

[2] For an analysis of these issues see two papers by Janusz Szyrmer, Vladimir Dubrovskiy, and Tamara Shygayeva: "Is the Private Sector More Efficient?" (in English and Ukrainian), January 1999, *ICPS Policy Studies*; and "Productivity and Profitability of the Ukrainian Enterprises of Different Ownership" (in Ukrainian), 1999/5, *Bankivska Sprava*.

months of 2000.[3] Devaluation made Ukrainian goods cheaper and, thus, more attractive to both domestic and foreign consumers. As a result, a significant import substitution effect was observed. In particular, several commodities experienced a steep decline in imports: Wood, by 13 percent; Footwear, by 8 percent; and Food, by 3.3 percent, including a 14 percent drop in imports of butter and fats. However, the rate of hryvnia devaluation abated while price inflation rate remained significant, and this could accelerate the growth of imports in the near future.

5. Increased world oil prices and stabilized domestic oil prices

Rising world prices of oil and oil products significantly affected the Oil-refining and Chemicals industries which experienced declines in production of 38 percent and 14 percent respectively. Domestic production of gasoline, diesel fuel, etc. also fell.

The rise in world oil and oil product prices, accompanied by controls on the price of oil on the domestic market, presented significant risks. Considerable price increases became unavoidable, thus resulting in higher inflation. The causal chain – "change in oil prices, change in other prices" – has been particularly pronounced in agriculture. The intensification of agricultural activities in spring tends to push up the price of oil and other agricultural inputs, which, in turn, results in higher agricultural product prices in the fall. This pattern has been observed in Ukraine for many years, and provides a good explanation for the tendency towards sharp increases of prices between August and October, that is, during the main harvest-gathering and processing period.

6. Increase in household real incomes

Growth in industrial production was stimulated by the increase in consumer demand resulting from higher household real incomes, which rose by 9.4 percent during the first eight months of 2000, compared to the same period in 1999. The most rapid increase occurred during the first two months of the year. According to data for the first quarter of 2000 (from household survey results presented by the State Statistics Committee), the greatest increase was observed in the purchase of consumer durables, like furniture, carpets, home appliances, and culture-related goods.

Interestingly, the increase in real incomes during this period was accompanied by a 6.4 percent decline in real wages. The demand for labor increased, and the number of job vacancies grew by 50 percent.

[3] Yet, unlike in 1999, during 2000, due to significant price inflation in Ukraine, the hryvnia revalued in real terms.

7. Increased demand for Ukrainian exports

Active participation of Ukrainian enterprises in international trade was a significant factor contributing to industrial growth 2000. For the first seven months of the year exports rose by 22 percent, while imports grew by 25 percent. Exports to CIS and Baltic states grew faster than those to all of Ukraine's other trade partners, while imports from these countries increased at a rate slightly lower than average.

Exports were the key growth factor in Metals. Over the first seven months of 2000, Metals exports grew by 37 percent. Given that a major part (three quarters) of the industry's output is exported, this precipitated an overall 20 percent growth in the industry's production. As Metals account for nearly half of Ukraine's total exports and 30 percent of all industrial production, this upsurge was an important factor in boosting total industrial production.

The growth in Machinery exports during the first seven months of 2000 finally led the industry out of its slump. In fact, Machinery showed signs of stable growth, running at 11 percent for the period. More than 30 percent of output was exported, and this comprised 8 percent of all exports. At the same time, however, all vehicle exports, including air and watercraft, declined by 10 percent.

The Wood Industry also enjoyed substantial growth. During the first seven months of 2000, exports grew by 33 percent, and production – half of which was exported – by 36 percent.

Exports of Chemicals rose nearly 50 percent during the first seven months of 2000. Although two thirds of the output was exported, production growth was relatively modest, at a mere 4 percent.

Exports of Processed Food grew by 29 percent, although they constituted less than 10 percent of the industry's output. The Processed Food share in total Ukrainian exports also remained low, at 2.4 percent.

If the demand for Ukrainian exports continues in the future, one can expect a continued growth in export-oriented industries.

8. Changes in the industrial output structure

A noticeable shift toward products with higher value added took place during the first seven months of 2000. Thus, the greatest growth in Ferrous Metals was in pipe production, which grew by 31 percent compared to the previous year. In Machinery, auto production grew by 72 percent; shipbuilding, by 54 percent; electronics, by 41 percent; and aircraft production, by 39 percent. The highest growth in Foods was in tobacco production, which grew by 52 percent; confectionery products, by 42 percent; and brewery products, by 35 percent. The production of cardboard and paper increased by 52 percent.

These positive changes reflect an ability within certain sectors to adapt to changing market conditions. The effect of such changes should become evident in the long run.

ENTERPRISE FINANCIAL PERFORMANCE

1. Enterprise mutual obligations and arrears[4]

The growth in production in most industries was accompanied by the considerable accumulation of mutual obligations. As of August 1, 2000, receivables came to UAH 197 billion, which was almost 50 percent greater than the nominal GDP in 1999. Payables as of that date were at UAH 272 billion – more than twice the nominal GDP in 1999.

An increase in overall obligations, when economic activities are reviving, is not necessarily a negative phenomenon. However, the accumulation of overdue obligations (i.e. arrears) should be a matter of concern.

Arrears result when poor payment discipline exists together with impunity for nonpayment. This reflects the presence of soft budget constraints, a phenomenon quite typical of the Ukrainian economy. While mutual obligations between enterprises support development of the national economy by facilitating mutual interest-free credits, overdue obligations do not. Arrears do not support, but rather, jeopardize development. Currently, they account for almost half of both total receivables and total payables.

Overdue receivables, being largely illiquid assets, significantly slow down the production process. As of June 30, 2000, overdue receivables for goods and services supplied stood at UAH 80 billion, which exceeded by almost 50 percent the value of Ukrainian enterprise inventories. Overdue receivables totaled approximately one third of all working capital, while the share of total receivables in working capital reached 71 percent.[5] Currently, inventory holdings account for approximately 20 percent of working capital, while cash and money in banks comprise less than 2.5 percent of working capital. Given that the rate of capital turnover is an important determinant of enterprise profitability, particularly during an economic crisis, enterprises suffer tremendous losses as a result of the massive volume of overdue receivables.

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[4] In the accounting system for enterprises, a distinction is drawn between obligations and arrears. Obligations are trade credits provided by enterprises to each other. Two types of such obligations exist: payables – that which the enterprise owes, and receivables – that which is owed to the enterprise. If obligations are not fulfilled within a specified period (usually three months), they become overdue and are referred to as arrears. There can be arrears in both payables and receivables, called, respectively, overdue payables and overdue receivables.

[5] In 1995 the share of receivables in working capital was 28 percent; in 1998 it was 62 percent.

Overdue payables inflict no less damage. Their presence precipitates not only unreliable partnership relations among enterprises but also delinquent payments to the budget, employees, and extra-budgetary funds. Three quarters of overdue payables are for deliveries.

The situation with arrears deteriorated significantly during the first half of 2000, compared to same period in 1999 (Table 1). This was particularly true of the increase in overdue receivables. It was also observed that the situation with overdue receivables for deliveries did not improve over the first seven months of the year 2000, compared to the same period last year, which was marked by a significant decline in output.

Table 1

Change in arrears, billions of UAH, and as percent of GDP, January–December 1999, January–July 2000, and January-August 2000

Indicators	Units	1999	Jan–Jul 2000	Jan–Aug 2000
Increase in overdue accounts receivable	UAH billion	18.4	21.2	12.8
	% of GDP	14.5	24.2	12.2
Increase in overdue accounts payable	UAH billion	23.9	16.3	11.1
	% of GDP	18.8	18.7	10.7
Increase in overdue accounts receivable for goods and services	UAH billion	16.3	21.3	13.2
	% of GDP	12.9	24.4	12.7
Increase in overdue accounts payable for goods and services	UAH billion	17.5	11.6	9.5
	% of GDP	13.8	13.3	9.1
Increase in overdue debt to the budget	UAH billion	4.5	3.5	1.0
	% of GDP	3.5	4.0	1.0
GDP	UAH billion	127.1	87.4	104.0

Sources: Monitoring (September 2000), Main Indicators (January, August and September 2000), and author's calculations

The poor payment discipline of Ukrainian enterprises forced the Government to adopt a much stricter policy toward payments for

consumed electricity, gas and coal, which are produced mainly by state-owned enterprises. Starting early in the summer 2000, the Government exercised strict, almost daily control over these payments. The electricity supply at a number of large debtor-enterprises was disconnected, and such measures began to elicit the desired response. Mutual obligations and arrears among enterprises began to decrease, and by the end of August had declined – not only when compared to the previous seven months of 2000 – but also to the corresponding period in 1999. The ratio of arrears to GDP has also decreased. Growth of most categories of arrears has slowed down (Table 2).

Table 2

Change in overdue receivables and payables, by category, UAH million, January–July 2000

	Overdue receivables	**Overdue payables**
Total, including:	21,216	16,333
- goods, works, services	21,310	11,594
- bills of exchange	-367	-217
- wage payments	N/A	-31
- budget	115	3,499
- extra-budgetary payments	N/A	403
- advances	-253	-38
- subsidiary enterprises	1,508	-672

Sources: Main Indicators (January and August 2000) and author's calculations

GDP growth and simultaneous slowdown of the rate of arrears accumulation led to a decline in the ratio of arrears to GDP (Figure 2).

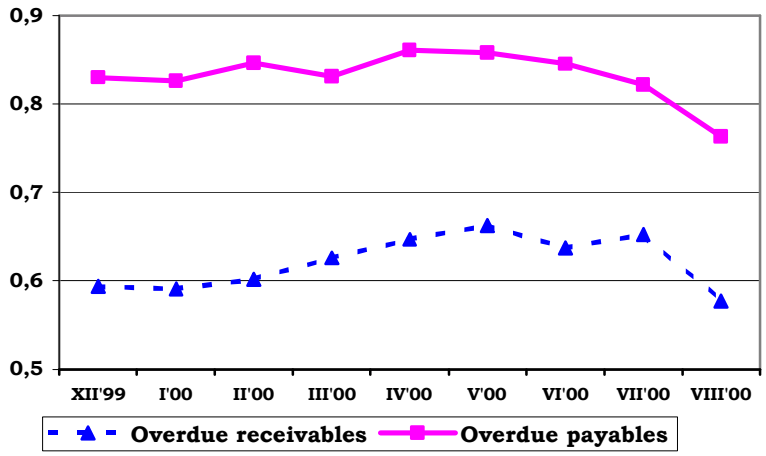
The relationship between receivables and payables is crucial for the assessment of the situation in the domestic economy. Taking into account that in Ukraine, receivables are calculated on the basis of costs, while payables are calculated on the basis of contract prices, one can conclude that the relationship between them indirectly characterizes the profitability of production. In Ukraine, as a whole, inter-industry receivables and payables were almost equal (as of August 1, 2000, UAH 145 billion and UAH 146 billion respectively[6]). However, comparing overdue receivables and payables, it can be

[6] Almost equal numbers for inter-enterprise receivables and payables reflect the situation with Ukrainian enterprises when the average profitability is almost zero.

seen that the former exceeded the latter (as of August 1, 2000, UAH 84 billion and UAH 81 billion, respectively). It means that producers were underpaid for delivered goods. Such extraction of liquidity from enterprises may substantially hinder their productive activity and may cause losses.

Figure 2

Ratios of overdue payables and overdue receivables to GDP, December 1999 – August 2000



Source: Monitoring (September 2000) and author's calculations

Power was in the worst shape. In the first seven months of the year 2000, receivables in this industry grew by nearly 70 percent, compared to the same period last year (Table 3). Out of this increase, 87 percent is attributed to the increase in arrears (overdue receivables). This means that this sector implicitly subsidized (by providing zero-interest credit) other sectors of the economy.

Such poor payment discipline has several explanations: (1) pervasive soft budget constraints; (2) lack of market mechanisms for the services related to generation and delivery of electricity; and (3) non-market pricing of energy final products as a whole.

Under the existing system, energy consumers have practically no choice in selecting their energy suppliers. A market mechanism is almost absent in the industry.

Unsatisfactory payments for electricity give rise to a "vicious circle" of arrears in the economy: being underpaid for the energy delivered, electricity suppliers and generators fail to fulfill their obligations to budget and suppliers. So, over the first seven months of 2000,

payables of Power grew 2.3 times compared to the same period of the previous year (Table 4). About three quarters of the increase in accounts payable are attributed to growth of overdue payables. Importantly, payables of Power, both overdue and non-overdue, grew faster than overdue and non-overdue receivables. Thus, the direction of subsidization began changing to the reverse: other industries and budget began subsidizing Power.

Table 3

Change in receivables, by industry, January–July 2000

Industries	Change in accounts receivable		Change in overdue accounts receivable		Change in overdue accounts receivable, as % of change in accounts receivable
	UAH million	Index*, %	UAH million	Index*, %	
Industry	**8,217**	**46**	**5,138**	**39**	**63**
Power	12,655	167	10,963	150	87
Fuels	933	25	280	12	30
Ferrous Metals	983	131	553	176	56
Non-ferrous Metals	59	38	-4		
Chemicals	119	32	-126		
Machinery	190	20	-8		
Wood	149	125	11	218	7
Construction Materials	-292		-49		
Light Industry	76	136	17		22
Food	937	198	47		5
Flour Milling and Feeds	42	85	-19		
Other	-7,634		-6,527		

* Index is constructed by dividing the change in (overdue) accounts receivable between January and July 2000 by the change in (overdue) accounts receivable between January and July 1999.

Sources: Main Indicators (January and August 2000) and author's calculations

Fuels suffered the most from arrears incurred by electricity generating companies. The latter paid for a mere 34 percent of all coal delivered to them.

Table 4

Change in payables, by industry, January–July 2000

Industries	Change in total accounts payable		Change in overdue accounts payable		Change in overdue accounts payable, as % of change in total accounts payable
	UAH million	Index*, %	UAH million	Index*, %	
Industry	**17,425**	**85**	**10,229**	**93**	**59**
Power	19,524	230	14,219	234	73
Fuels	1,946	67	1,920	458	99
Ferrous Metals	398	28	-327.5		
Non-ferrous Metals	13.0	6	55.2	23	425
Chemicals	994	131	166	952	17
Machinery	1,077	71	508	63	47
Wood	192	90	-2		
Construction Materials	-121		25	7	
Light Industry	308	223	163	301	53
Food	963	138	349	188	36
Flour Milling and Feeds	-32		-61		
Other	-7,837		-6,786		

* Index is constructed by dividing change in (overdue) accounts payable in January-July 2000 by change in (overdue) accounts payable in January-July 1999.

Sources: Main Indicators (January and August 2000) and author's calculations

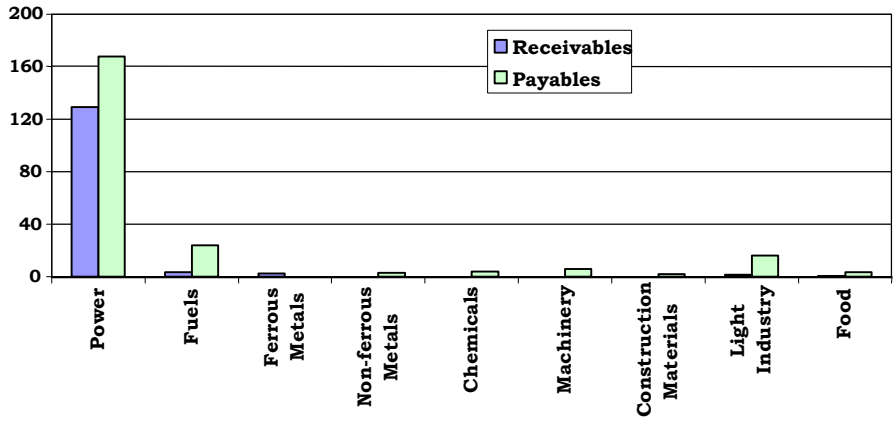
Despite the growing overdue receivables, Fuels was in better shape in terms of payments collection than Power. The increase in Fuels receivables for the first seven months of the year 2000 constituted 25 percent, and overdue Fuels receivables increased by nearly 30 percent.

At the same time, Fuels payments to creditors were much worse. Of payables, 99 percent is attributed to the increase in overdue payables. Over the first seven months of 2000, payables increased by 67 percent, while overdue payables grew 4.6 times compared to the same period of the previous year. This industry also has the greatest debt to the State Budget.

As industries of the economy vary considerably in size, it would be useful to compare the ratio of increase in arrears (both receivables and payables) to industrial sales during the period analyzed. The increase in overdue receivables is spread quite evenly throughout all industries (Figure 3), and this increase is rather insignificant if expressed as a ratio to industrial sales. The only significant deviation occurs in Power. The increase in overdue payables to industrial sales is not distributed so evenly. The greatest increase appears in Power, although Fuels and Light Industry also show significant increases.

Figure 3

Ratio of change in overdue receivables and overdue payables to industrial sales, percent, January–July 2000



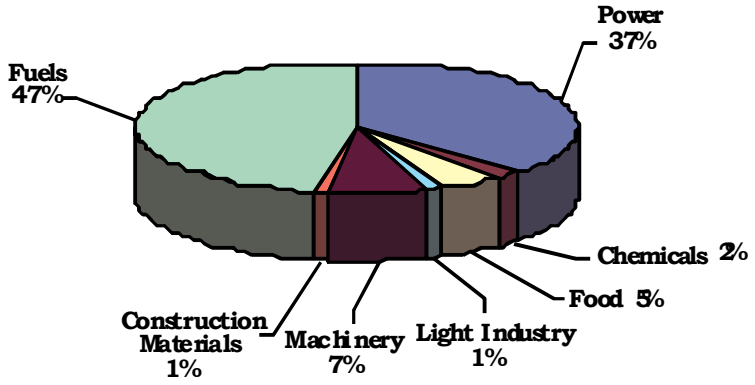
Sources: Monitoring (September 2000), Main Indicators (January and August 2000), and author's calculations

It is not accidental that Power and Fuels perform significantly worse than other industries in terms of payments to the State Budget. Fuels accounts for nearly a half of overall industrial arrears to the budget and increased 3.4 times over the first seven months of 2000. The share of arrears of Power to the budget is also large – 37 percent (Figure 4).

The ratio of arrears to industrial sales also indicates that Fuels and Power differ significantly from other industries in terms of payments to the budget (Figure 5).

Figure 4

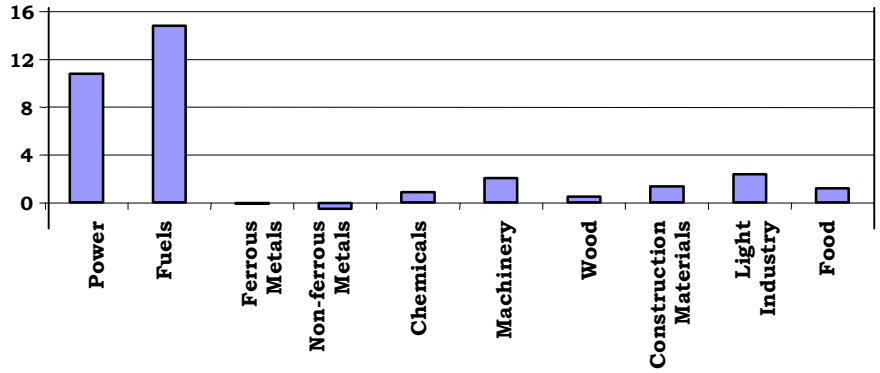
Arrears to the budget, by industry, percent, as of September 1, 2000



Source: Main Indicators (August 2000)

Figure 5

Ratio of arrears to the budget to total industrial sales, percent, January–July 2000



Sources: Main Indicators (January and August 2000) and author's calculations

2. Profitability

As financial statements show in January-July 2000, 56 percent of all industrial enterprises were loss-making (Table 5).

Among all industries, Oil (both Extraction and Refining) and Metals return the largest profits. These industries, however, do not seem to have a bright future, given the modest energy resources in Ukraine.

They remain operational, largely due to tax exemptions and government support via regulation of input and output prices. Of all officially profitable industries, only Food receives no direct support from the state. Power ended up with substantial losses, which is related to the diverse subsidies it both provides and receives (see above).

Table 5

Enterprise profitability, by industry, January–July 2000

Industries	Profits, UAH million	Share of profitable enterprises, %
All	**4,908**	**44**
Power	-991	44
Fuels	1,755	35
Oil Extraction	848	67
Oil Refining	974	64
Natural Gas	75	75
Coal	-138	32
Ferrous Metals	3,251	59
Non-ferrous Metals	195	62
Chemicals	214	47
Machinery	-169	39
Light Industry	-16	44
Food	530	46

Sources: Main Indicators (January and August 2000)

Arrears to the budget are likely to correlate negatively with the profitability of industries. The higher the profitability, the better the performance of a particular industry in terms of servicing its obligations toward the budget (taxes and other payments), hence, the lower its arrears to the budget. In fact, until recently this relationship was not as strong as one would expect. Results for the first seven months of 2000 suggest that this correlation began occurring. It remains negative for Fuels. In this industry, gas and oil exploration expenses are not included in industry expenses. Therefore, the profitability indicators for this industry are unjustifiably high, since most exploration activities are funded out of profits.

CONCLUSION

In Ukraine, for a number of years until the second half of 1999, we witnessed a systematic worsening of almost every major economic indicator. The most recent data, however, seem to suggest that ***an economic growth has begun*** and is likely to continue for some time. As presented in this chapter, the expansion of industrial output and improvements in many financial indicators can be explained by a number of factors. Some of them – such as low comparison base, hryvnia devaluation, and stable domestic oil prices – are not likely to provide continued support for growth in the long run. Several other factors – such as privatization, fixed capital formation, access to international markets, and structural transformations in Ukrainian industry – should produce long-run positive effects. While the first-mentioned factors do not ensure sustainable growth, the last-mentioned should continue to stimulate further expansion of the economy.

Exports have finally turned into a powerful driving force for the entire economy, and for industry in particular. Low financial discipline remains a serious stumbling bloc, but even in this area some improvements have been noticed. ***For most industries the situation has stabilized, with the exception of Power and Fuels,*** where arrears continued to grow. However, even within Power and Fuels, the active efforts of the Ukrainian Government should begin to show positive results in the near future.

Despite improvements in overall trends, ***the most fundamental economic problems remain***. The chronic indebtedness and low or negative profitability of many enterprises are a result of the low level of market transformations, inconsistent policies, pervasive price distortions, continued government interference in pricing, and weak financial discipline. The speed and long-run sustainability of growth will depend on the Government's success in its struggle against these transition economy "attributes," still solidly entrenched in Ukraine.

Data Sources

Main Indicators of Social and Economic Development of Ukraine. January, August, and September 2000. Kyiv: State Statistics Committee.

Monitoring of Major Macroeconomic and Industrial Indicators. September 2000. Kyiv: Ministry of Economy, Department of Economic Strategy.

The Economic Situation in Ukraine: 2000[1]

Olga Pogarska,
Janusz Szyrmer,
and Khwaja Sultan

Overview

The year 2000 was significant in many respects. For the first time since independence Ukraine registered an annual ***growth in GDP***, which was to a significant extent the result of the ***reversal of some of the bad policies*** of the past. The depreciation of the hryvnia increased the demand for domestic goods. Removing some of the administrative restrictions on the purchase of foreign currency also helped.

The changes in the policy were noticeable and predominantly positive. The liberalization of the monetary and exchange rate policies was an important step in the right direction. The government began privatizing agricultural land, but this time the intentions were serious. An ambitious plan was developed for privatization of the national telecommunications company, Ukrtelecom, and the metallurgical giants. The government also managed to restructure most of its external debt due in 2000–2001 by issuing long-term bonds. Admittedly, while this prevented what could have been a financial collapse, it merely postponed redemption of the bonds to a future date.

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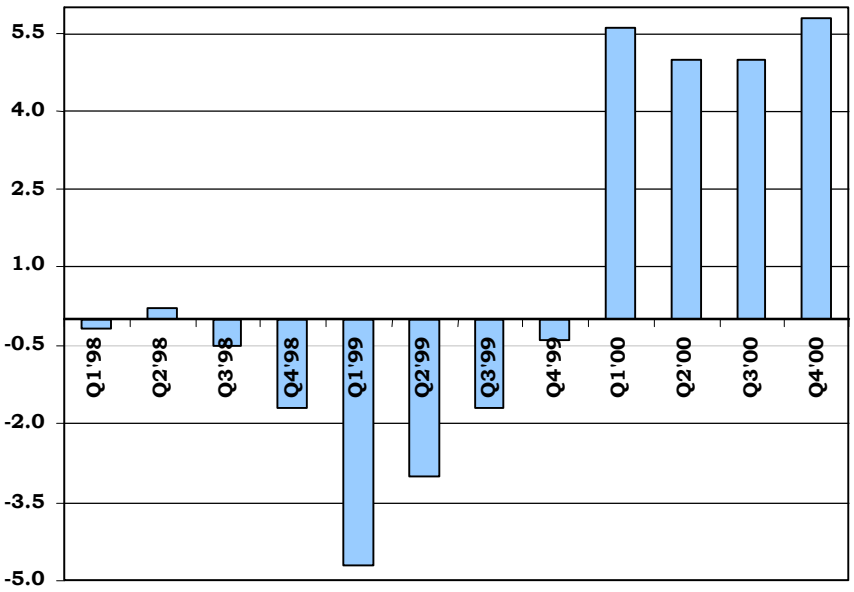
[1] Unless otherwise specified, the sources of the information and data provided in this chapter were: Financial Week (2000); Monitoring (February 2001); and Trends (December 2000 and February 2001).

1. Output and growth

The GDP increase in 2000 of 5.8 percent over the previous year should be attributed to the rapid growth of 13 percent in industrial output. Given the very low GDP in the first half of 1999 (Figure 1), one might have questioned the significant growth in the first half of 2000. However, the continued pattern of output growth in the second half of 2000 seemed to signal the long-awaited start of an economic revival after a decade of decline.[2] At the same time, certain factors must be addressed if the growth of the Ukrainian economy is to become sustainable:

Figure 1

GDP growth, cumulative, year-to-year, percent, quarterly, 1998–2000



Note: Data for each quarter includes the entire period from the beginning of the year. For example, data for the third quarter covers the period from January through September.

Source: Bulletin (November 2000 and April 2001)

1) To some extent, the growth of GDP could be attributed to political factors: Victor Yushchenko's appointment as prime minister and the formation of a "reform-minded" cabinet increased business expectations for further liberalization and

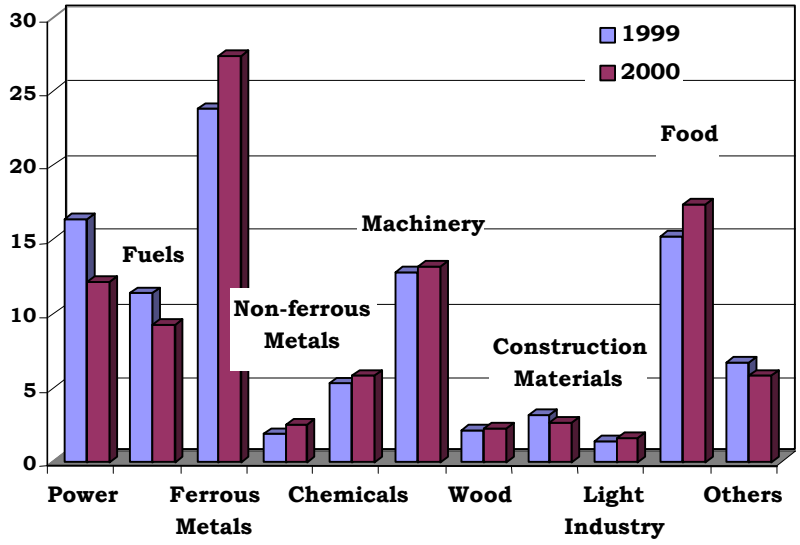
[2] See also "Industrial Production and Finance" in this volume.

reforms, which apparently stimulated some economic activity. However, significant progress in structural reforms is necessary if this growth is to become sustainable.

2) The increase in real GDP in 2000 year could also be attributed to the favorable situation in external markets. An increase in world metal prices stimulated an increase in Ukrainian exports. The share of Metals in total exports increased by 33 percent in 2000, compared to the previous year, and amounted to about 45 percent of total Ukrainian exports. At the same time, the increase in world oil prices had little impact on domestic prices due to the pricing policy that insulates the domestic market, at least in the short run, from large price hikes. The anticipated worsening of the situation in external markets in 2001 – the slowdown of growth in the US, stagnation in Japan, and the decline in world metal prices – may negatively affect future growth in Ukraine.

Figure 2

Industry structure, percent of total output, end of year, 1999-2000



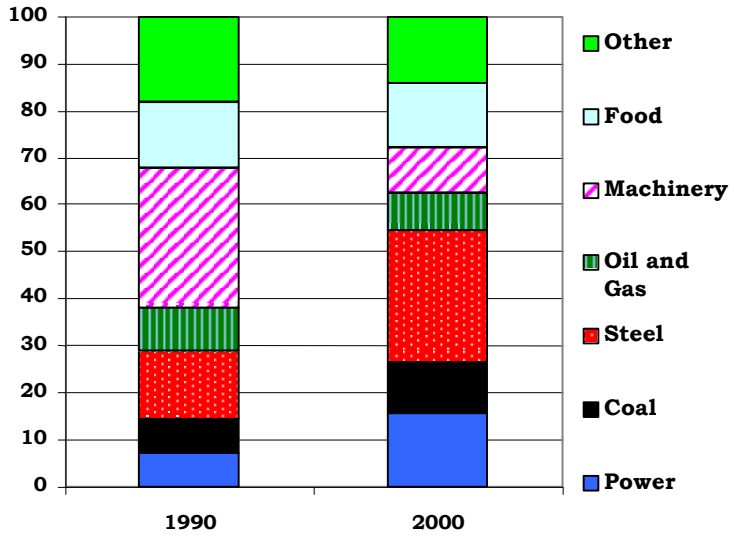
Source: Financial Week (2000/3 and 2001/3) and authors' calculations

3) Analysis of the structure of production in Ukraine shows some positive trends: the share of Food, Machinery, and Light Industry increased in 2000, compared to the corresponding period of 1999 (Figure 2). At the same time, however, the share of heavy industries, like Metals (both Ferrous and Non-ferrous) and Chemicals, also increased while output in Power and Fuels

declined. The good news was that the Ukrainian economy became less energy-intensive. The bad news was that its structure remained heavily distorted. Ten years ago the share of heavy industry was very high and further increased during the last decade, while the shares of Machinery and Consumer Goods declined (Figure 3). In the mean time, the high value-added industries remained underdeveloped. In many cases, enterprises within heavy industry (Steel, Coal, Chemicals and others) remain subsidized by the Government. This support creates a false impression of profitability and results in the diverting of investments away from more efficient, non-subsidized industries. Finally, because relative world prices for the products of heavy industry have been declining gradually, the sector does not hold much promise in terms of growth.

Figure 3

Sector share in industrial output, percent of total production measured in international prices, 1990 and 2000



Source: Trends (December 2000)

2. Enterprise arrears

Enterprise receivables increased from UAH 158.9 billion during January-November of 2000 to UAH 189 billion. In the same period, enterprise payables increased from UAH 189.2 billion to UAH 234.1 billion. Roughly one-half of payables and receivables were overdue.

Despite the high level of growth in industrial output in 2000, the situation with enterprise arrears[3] improved only slightly: overdue payables declined from UAH 107 billion at the beginning of 2000 to UAH 103 billion at the end of the year, while overdue receivables increased from UAH 76 billion to UAH 80 billion.[4] The situation in the energy sector was particularly severe. Total arrears, or overdue receivables, for the sale of energy to consumers amounted to UAH 19 billion as of December 1, 2000, or 55 percent of total industrial overdue receivables (Main Indicators, December 2000). Even though there were declines in the share of overdue accounts payable in total enterprise payables, from 54 percent at the beginning of 2000 to 46.3 percent as of January 1, 2001, and in the share of overdue receivables in total receivables, from 46.1 percent to 45 percent respectively, the vital structural problems in the economy still remained to be resolved.

3. Inflation

Ukraine experienced increasing inflation: in 2000, between January 1 and December 31 consumer prices increased by 25.8 percent. Prices grew so quickly during the year that the official inflation forecast was raised twice: from 17.6 percent to 19 percent in early February, and to 25-26 percent in early July 2000.[5] The year-on-year inflation peaked in the third quarter at 31.1 percent,[6] which was its highest rate since the end of 1996 (Figure 4). In 1999 inflation remained relatively moderate, partly owing to price controls (open and hidden), mainly on food, at the regional level.

Throughout 2000 (January through December), food items experienced the largest price increases: meat and poultry increased by 69 percent; bread and bakery products, by 60 percent; and fruits and vegetables, by 58 percent. These increases, while painful to consumers,[7] had an overall positive effect on agriculture and food processing, contributing to the growth in these sectors in 2000. The prices of non-food items increased moderately, by 8.9 percent. The share of imports in this group was significant, at about 50 percent. The relatively stable exchange rate was a key reason for

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[3] For definitions of enterprise obligations and arrears see "Cyclical Dynamics of the Demonetized Sector" in this volume.

[4] Overdue receivables and overdue payables in 1999 increased by 32.2 percent and 29.3 percent respectively, and year-on-year inflation amounted to 22.7 percent. In 2000, overdue receivables increased by only 6.3 percent while overdue payables actually declined by 2.3 percent, and average inflation was 28.2 percent. Thus, the state of enterprise arrears improved considerably in real terms.

[5] Financial Week (2000/14 and 2000/28).

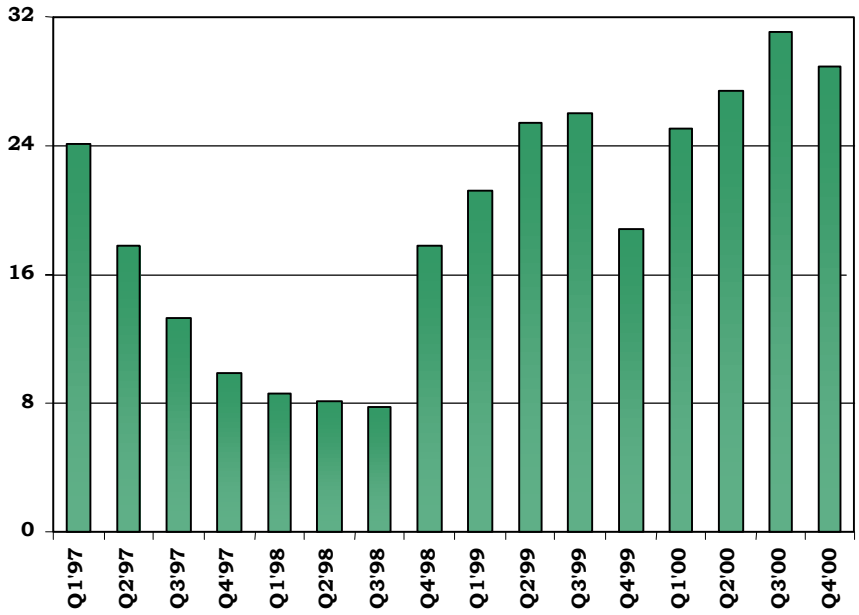
[6] Calculations were based on Monitoring (February 2001).

[7] Nominal incomes of the population in 2000 increased by 40 percent, and nominal pensions, by 23 percent (see below).

slow price growth. Wholesale prices rose by 20.6 percent throughout 2000, compared to 15.7 percent in 1999. The largest price increases in 2000 were in Flour and Cereals, which increased by 57.2 percent; Fuels, 35.5 percent; Processed Food, 30.3 percent; Chemicals, 25.3 percent; and Light Industry products, 22.6 percent.

Figure 4

CPI, year-on-year changes in average consumer price levels, quarterly, 1997-2000



Source: Monitoring (February 2001) and authors' calculations

These increases could be explained by:

- the growth in monetary aggregates in 2000: the monetary base increased by almost 40 percent
- the increase in housing and utilities rates – the latter, by 31 percent – pursuant to IMF requirements
- the continued liberalization of agricultural prices, and
- increased world raw-metal prices: nickel more than doubled, aluminum and copper increased by 30-40 percent, etc.

4. Trade[8]

The official foreign trade balance in 2000, for both goods and services, amounted to USD 2.7 billion, compared to USD 2.2 billion in 1999. Year-on-year, exports increased by 18.8 percent, whereas in 1999 they had declined by 7.9 percent. Imports increased by 18.2 percent, and in 1999 had declined by 19.5 percent. Visible exports – i.e., the exports of goods – increased by 25 percent, and visible imports, by 18 percent. The visible trade surplus was USD 0.6 billion, compared to a deficit of USD 0.2 billion in 1999. The major increase in exports occurred in Metals – by 33 percent (Figure 5). This increase, however, was not particularly welcome. First, Metals exports do not help remove the severe structural distortions in Ukrainian industry: Metals is a low value-added energy-intensive industry, which pollutes the environment and supports an obsolete industrial base. Second, Metals is virtually subsidized with cheap energy and soft taxes. Third, unlike Consumer Goods and Machinery, Metals does not stimulate much market-learning, in terms of modern marketing, institution building, etc. Fourth, the growth in Metals exports in 2000 was due to favorable world market conditions and could be short-lived. Fifth, the significant increase of metal exports rather than other commodities, such as Machines and Consumer Goods, reflects the numerous trade restrictions that affect the country's export potential; for example, significant restrictions remain on the trading activities of small businesses.[9]

The low responsiveness of exports to changes in the exchange rate could be explained by the fact that many large enterprises, most of which were state owned, had not been restructured. While most other CEE countries had accomplished a major shift in the structures of their exports and imports toward more value-added goods, Ukrainian trade experienced a slower rate of change (Figures 5 and 6).[10]

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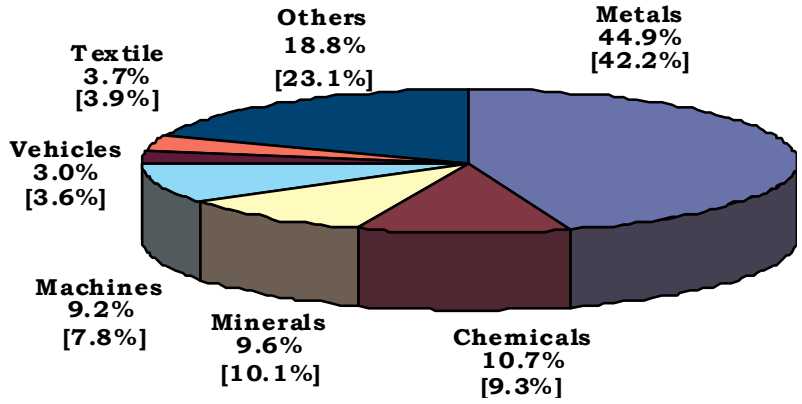
[8] Data provided in this section is from Outlook (2001) and Monitoring (February 2001).
[9] See Szyrmer et al. 2000. "Trade Growth in Ukraine: Impediments and Solutions." Unpublished manuscript. Kyiv: Harvard/CASE Ukraine Project (www.case.org.ua/orm).
[10] Between 1992/93 and 1998, the export share of raw materials and fuels in countries like Poland, the Czech Republic and Slovakia declined significantly: by 56 percent in Poland, 45 percent in the Czech Republic, and 27 percent in Slovakia. The respective figures for imports were: 55 percent, 36 percent, and 43 percent. At the same time, both exports and imports of machinery in these countries increased substantially. In 1998, the import and export shares of fuels and raw materials remained below 15 percent, while machinery reached about 40 percent – with the exception of Poland's machinery exports, which were 28 percent (Rocznik, 2000). In Ukraine, the trade structure remained unfavorable, with a high share of fuels and raw materials, above 60 percent, and low share of machinery, below 20 percent.

Figure 5

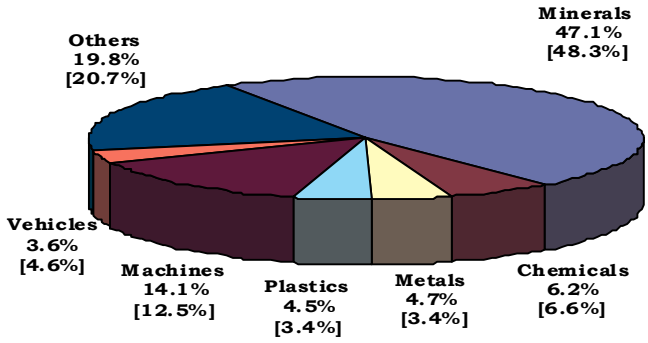
Structure of Ukrainian exports of goods, percent, 2000 (corresponding 1999 figures in parentheses)



Source: Outlook (2001).

Figure 6

Structure of Ukrainian imports of goods, percent, 2000 (corresponding 1999 figures in parentheses)



Source: Outlook (2001).

5. Monetary policy

Monetary policy underwent a significant change in the first quarter of 2000. The National Bank of Ukraine abandoned the exchange rate corridor and allowed the exchange rate to float. Ironically, under the corridor regime, which was supposed to keep the rate stable, it actually remained painfully volatile. Since January 2000,

when the efforts to contain the rate within an officially established corridor were abandoned, the rate remained respectfully stable: depreciation in 2000 was only 4 percent, compared to 52 percent in 1999. On the other hand, if one took into account the NBU's continued heavy interventions in the Ukrainian inter-bank market, the exchange rate regime was still far from a "free float" and, properly speaking, should have been classified as a managed float, and a heavily managed one at that.

Ukraine's external debt in 2000 was serviced in a timely manner, and almost without any new loans from international financial organizations.

The official hryvnia exchange rate in 2000 changed from 5.22 UAH/USD at the beginning of the year to 5.44 UAH/USD at year-end. The stability of the exchange rate could be explained by:

- the NBU policy to maintain a stable exchange rate, i.e., its active participation in the currency market, restrictions on the simultaneous purchase and sale of hard currency, and its use of a variety of measures to prevent speculative attacks on the foreign exchange market;
- the hard currency surplus on the Ukrainian inter-bank currency exchange, caused by the positive trade balance, the increase in privatization revenues, and foreign direct investments;
- the successful restructuring of part of the external debt; and
- increased demand for the national currency, caused by the growth in GDP and an increase in monetization of the economy, i.e., the reduction of barter operations and elimination of non-cash settlements, especially in the energy sector.

In 2000, the NBU acquired over USD 1.4 billion on the currency market, which was used to service the external debt and strengthen official foreign currency reserves. By the end of 2000 these reserves reached USD 1.6 billion, the highest level in three years. Unfortunately, this was still an alarmingly low level of reserves and affected the macroeconomic stability of the economy. Slovenia, Croatia, Bulgaria, Romania, and Slovakia had higher foreign reserves – about USD 3 billion each – despite the fact that these countries are several times smaller than Ukraine. The central European nations – Poland, the Czech Republic and Hungary – had foreign reserves of USD 700-1,300 per capita, while in Ukraine the ratio was USD 30-40 (Business Central Europe, April 2001).

In the second half of 2000, the NBU became concerned about the rapid growth of monetary aggregates. Heavy interventions in the inter-bank currency exchange and the relaxation of monetary policy

aimed at stimulating bank lending, resulted in 2000 in a growth in the money supply of UAH 10 billion, or 45 percent. The banking sector experienced a liquidity surplus, which led to reduced interest rates on credit resources. However, bank services remained expensive and the interest rate spread, i.e., the difference between deposit and credit rates, was consistently high, which suggested that the banking efficiency was not improving.[11]

The relaxation of monetary policy resulted in lower interest rates and lower bank-reserve requirements. In April 2000, the NBU decreased the annual discount rate to 29 percent and the Lombard rate to 34 percent, and in August – to 27 percent and 30 percent, respectively. Reserve requirements for the banks were reduced gradually from 17 to 15 percent. Inparallel, in order to rein in effective money supply, the NBU decided to broaden the definition of assets subject to reserve requirements.

6. The banking sector[12]

As the price of credit dropped, commercial banks increased their investment activity. As a result, the total credit portfolio rose by UAH 8 billion in 2000, from 21 percent of total bank assets at the end of 1999 to 23 percent at the end of 2000 (Figure 7). At the same time, however, the volume of long-term loans decreased from 17 percent of total portfolio in 1999 to 14 percent in 2000.

The low level of lending – between 20 and 30 percent of total assets – implied that a major portion of assets was being used in non-lending operations, thus, undermining one of the primary functions of a bank as a financial intermediary.

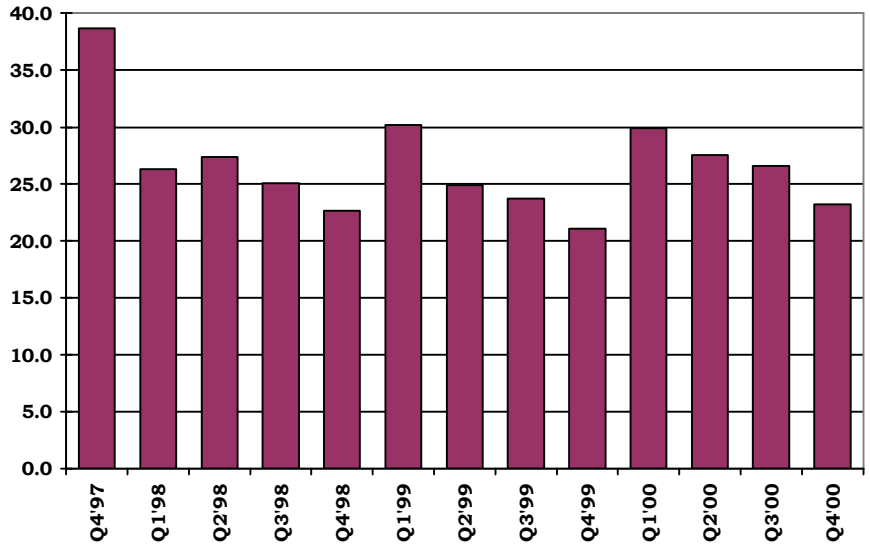
The share of problem loans (bad, prolonged, and substandard loans) in the credit portfolio of Ukrainian commercial banks as of January 1, 2000 remained very high at about 18 percent. Sixty percent of problem loans of seven large banks were directed loans provided by the banks for various government programs.[13] The obligation of banks to service *Kartoteka* #2 and to hold government securities, imposed additional costs, thus reducing bank efficiency even further. At the end of 2000, *Kartoteka* #2 amounted to about UAH 94 billion, which was almost equal to the total value of all assets in the entire banking system. Nonetheless, some positive changes were observed. In December 2000, Ukraine's parliament, the *Verkhovna Rada,* adopted a law that abolishes *Kartoteka #2* in 2001. This law can be considered to be one of the major

[11] See "Institutional Development of the Banking System" in this volume.
[12] The data provided in this section is from Bulletin (January 2001) and the Harvard/CASE database.
[13] Data for June 30, 2000.

accomplishments in Ukrainian reforms over the past few years. It remains unclear, however, how effective the new mechanisms will be, including those set forth in the law of Ukraine on Amendements to the law of Ukraine on Restoring the Solvency of the Debtor or Declaring It Bankrupt implemented on January 1, 2000.

Figure 7

Credit portfolio of Ukrainian banks, percent of total assets, Q4'1997-Q4'2000



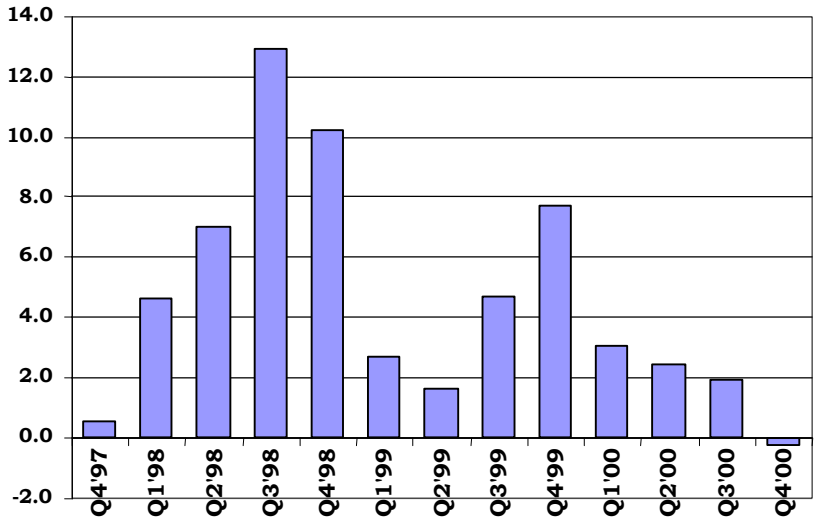
Source: Harvard/CASE database

The profitability of the banking system in 2000 declined sharply compared to 1999, and the entire sector suffered losses totaling about UAH 16 million (Figure 8). Since the end of 1999, the return on equity of commercial banks declined and became negative by the fourth quarter of 2000 – a loss of 0.3 percent, compared to a gain of 7.7 percent in Q4'99 and 10.3 percent in Q4'98.

The poor health of the banking system is related to the low confidence people have in banks. Enforcement of prudential norms, reserve requirements, and transparent accounting standards on the financial intermediaries (banks, stock markets, etc.) are important measures for protecting bank customers and increasing their confidence, which is of crucial importance in any financial operations.

Figure 8

Profitability of Ukrainian banking system, percent, Q4'1997–Q4'2000



Note: Profitability is measured by the return on equity ratio (net profits over equity capital).

Source: Harvard/CASE database

7. Government income and expenditures[14]

On February 17, 2000, the law on Budget 2000 was adopted in which the enforcement of a zero budget deficit was accompanied by the elimination of non-cash settlements with state and local budgets. The policy in the budget sector could be characterized as inconsistent: on the one hand, it abolished all kinds of budget subsidies and privileges, and on the other, it continued the policy of soft budget constraint with both individual enterprises and whole industrial branches. Traditionally, the most subsidized industries are Agriculture, Power, Fuels, and Ferrous Metals. Since October 2000, poor payment discipline and expectations that the practice of mutual settlements would resume threatened the budget with revenue shortfalls. This led the Government to again permit nontransparent debt settlement schemes and various in-kind payments. While about UAH 4.8 billion in budget debts were settled in the period January-November 2000, UAH 3.1 billion of debts were settled in December alone.

[14] This section was based on Outlook (2001/1).

The rate of execution of consolidated budget revenues was 114 percent of the amount approved in the Law on the State Budget of 2000. Budget revenues in real terms, i.e., excluding inflation, increased by 6 percent compared to the previous year.[15] Taking into account, however, real GDP growth in 2000, one would have expected a more significant real budget revenue increase. There were a number of reasons for the high rate of budget revenue execution, in particular:

- inflation in 2000 was much higher than assumed in the Budget Law;
- local budgets performed much better than they were required to by the Law: for January-November 2000, local budget revenues were executed 128 percent;
- the inclusion in the budget of income from a number of former extra-budgetary funds also affected fiscal performance positively.

Consolidated budget expenditures in 2000 were executed 112 percent and totaled UAH 47.3 billion. Although the share of social expenditures slightly increased, this item remained under-financed at the local level. Unfortunately, the largest increase – almost 70 percent in real terms – occurred in public administration expenses.

After a long history of poor fiscal management, the consolidated budget in 2000 finally showed a surplus of about UAH 1 billion. However, if standard IMF methodology for calculating budget deficits is applied and receipts from privatization are excluded, then Ukraine finished the year with a UAH 1.6 billion deficit, or roughly 0.9 percent of GDP. Nevertheless, there was significant progress in budget management in 2000. Also, unlike in previous years, the 2001 Budget Law was adopted in an orderly manner as early as December 2000.

The work on the draft Tax Code was an important step in Ukrainian tax reform. The code contained a number of measures aimed at easing the tax burden, the major features of which were: reduction of the enterprise profit tax rate, or EPT; reduction in the number of excise taxes, local taxes, and tax privileges; elimination of the special tax on amortization; and an increase in the non-taxable maximum income. Despite the improvements in the taxation system set forth in the draft code, little change was provided for in the area of tax administration, which most experts believe is a precondition for tax reform to be successful.

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[15] In comparable terms, budget expenditures rose only by 0.1 percent, as some items included in the 2000 budget were financed from the extra-budgetary funds in the previons years.

8. Household incomes and expenses

The income of Ukrainian households in 2000 totaled UAH 86.8 billion (Table 1), or USD 0.90 per person per day.[16] This income increased year-on-year, in real terms, by 6.3 percent, excluding taxes and other mandatory charges. The increase in disposable income could be attributed to the increased total wage fund (by 38.6 percent, about 10 percent above the average inflation rate). However, there was a decrease in the share of wages and salaries, pensions and other social transfer payments, and foreign currency purchases in total household income.

Expenditures from personal savings increased in 2000 by 15 percent compared to 1999. Total expenditures in nominal terms in 2000 increased by about 41 percent compared to 1999, while real household consumption increased by 11.5 percent[17] during the same period. The largest portion of the expenditures increase in 2000 was on taxes and other mandatory payments, and goods and services. The former was caused by considerable increases in housing and utilities tariffs, and the latter, by significant increases in food prices and the CPI as a whole.

Official per capita monetary income in 2000 increased somewhat to UAH 1,749 (USD 322), compared to 1999 (UAH 1,240 and USD 300 respectively).[18] The payment of arrears in wages, pensions and other social payments was an important factor in the per capita monthly income increase. The average wage increase was 35.4 percent in nominal terms and 3.6 percent in real terms, compared to the corresponding period in 1999. However, average wages in dollar terms continued to fall, although at a decreasing rate (Table 2). The nominal average wage increase was partially affected in 2000 by a 60 percent increase in the minimum wage from UAH 74 to UAH 118. All of this data, however, should be treated with caution because of the existence of the shadow economy and tax evasion. Moreover, many enterprises in various regions of Ukraine paid wages to their employees in the form of goods, although the share of wages paid in this manner decreased in 2000.

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[16] The World Bank considers an income of one dollar per person per day as a rough benchmark of poverty. In Ukraine, despite respectable progress, most of the population still lives in poverty, at least in terms of official income.

[17] UEPLAC estimates. This includes only official household consumption, which is registered. According to UEPLAC methodology, real monetary income in 2000 increased by 9.4 percent compared to 1999. See Trends.

[18] The U.S dollar equivalent of income per capita was obtained by dividing nominal monetary income per capita in hryvnia by average exchange rate for the year.

Table 1

Household incomes and expenditures, by category, selected indicators, 1999 and 2000

	2000			1999
	UAH billion	% change from previous year	% of total income (expenditures)	
Total income	**86.8**	**40.4**	**100**	**100**
Wages and salaries	42.5	38.6	48.9	49.6
Sale by private persons	4.5	58.2	5.2	4.6
Pensions, aid and stipends	18.2	23.4	20.9	23.8
Foreign currency sales	4.2	14.4	4.8	5.9
Other income	17.4	75.2	20.2	16.1
Total expenditures and savings	**83.7**	**40.6**	**100**	**100**
Purchase of goods and services	59.9	43.1	71.5	70.3
Mandatory payments	11.7	74.0	14.1	11.3
Savings, incl. purchase of securities	5.2	15.0	6.3	7.7
Foreign currency purchases	4.0	-18.3	4.7	8.2
Other expenditures	2.9	88.9	3.4	2.5
Income in excess of expenditures (+) or expenditures in excess of income (-)	**3.1**	**34.3**	**3.6**	**4.2**
Average annual inflation rate, %	**28.2**			**22.7**

Source: Financial Week and Bulletin (April 2001)

The official unemployment rate in 2000 was impressively stable, gradually declining from 4.3 percent at the beginning of the year to 4.2 percent at year-end. Despite this slight positive change in the labor market, the situation remained difficult. Administrative and agricultural reforms resulted in reduced employment in these sectors. Moreover, official unemployment figures did not reflect forced part-time unemployment: compulsorily reduced working hours, mandatory unpaid leaves of absence, etc. The average duration of unemployment remained unchanged at about eleven months.

Table 2

Wage dynamics, 1998-2000

	1998	1999	2000
Average wage, UAH	153.50	177.52	230.09
Wage increase, Dec-to-Dec, percent	5.6	24.3	35.4
Average wage, USD*	62.7	43.0	42.3

* Average wage in dollar terms was calculated by dividing average wage in hryvnia by average exchange rate for the year.

Source: Trends (February 2001)

9. Social payment arrears

The government kept its word to repay all pension arrears in 2000 – about UAH 1.3 billion – and did so by September 8. Obviously, this did not eliminate the need for pension reform. In the mean time, the gradual worsening of the age structure in Ukraine continued. The population numbered 51.7 million at the end of 1995, 49.7 million – 1999, and 49.3 million – 2000. Death rates in 2000 were almost twice as high as birth rates. Thus, as the population and number of people active in the work force decreases, the number of pensioners and average age of the population is rising. The current, so-called pay-as-you-go pension system is losing its capacity to support the growing army of pensioners. Three working persons currently support two pensioners. In fact, this ratio will continue getting worse: the "baby-boomers" have already begun entering retirement age.

The wage and salary debt to budget organization employees declined impressively in 2000 – by one-half in nominal terms, and by two-thirds in real terms – reaching UAH 262 billion by year-end. The largest amount of wage arrears was in Education, which comprised 42 percent of total budget-sphere wage arrears, and in Healthcare, which comprised 30 percent. Budget-sphere wage arrears constituted 5.3 percent of total wage arrears, which declined by 40 percent in real terms in 2000 – already the second year of decline.

Declining wage and pension arrears were accompanied, however, by growing government liabilities in other spheres – VAT refunds, T-bill debt, etc. The repayment of arrears in one sector therefore resulted in the accumulation of arrears in others.

There appears to be a significant negative relationship between arrears and inflation. While monetary expansion is still one method of financing state debt, the procedure is less straightforward than it

was in the early 1990s when printing presses were used to finance large budget deficits. In time the deficit vanishes, but monetary expansion remains strong and the state continues to collect an "inflation tax."

10. External debt

One of the important tasks of the new government in 2000 was the restructuring of external debt, the total sum of which amounted to USD 2.1 billion. The debt restructuring saved the country from financial collapse and gave the government some leeway to improve the performance of the economy so that the debt could be redeemed.

About 99 percent of Ukrainian bonds that were to mature in 2000-2001 were restructured:

- Euro-denominated bonds (EUR 500 million)
- Merrill Lynch bonds (USD 258 million)
- Chase Manhattan bonds (USD 74 million)
- German-mark-denominated eurobonds (DEM 1,538 million)

These bonds were converted into new, euro-denominafed or dollar-denominated eurobonds maturing March 2007: EUR 1,133 million and USD 1,129 million. The principal payments on the new eurobonds will start in March 2001 and will run through March 2007. Beginning in June 2000, Ukraine was to pay interest payments - quarterly coupon income of 11 percent annually on dollar-denominated bonds, and 10 percent annually on euro-denominated bonds.

Despite the large-scale restructuring, the interest and principal payments that remained to be paid in 2000 were still very large. As a whole, in 2000 Ukraine's external debt declined by USD 2.1 billion, or 17 percent. At the end of the year this debt was USD 10.3 billion. It was the first year after independence that external debt decreased in Ukraine. In 2000 Ukraine received almost no new loans from the IMF or other international organizations. The IMF EFF program was suspended in September 1999, and some new credits came only in December 2000.

Ukraine had yet to solve the problem of its debt to Paris Club member countries and to Turkmenistan, both of which Ukraine stopped servicing at the beginning of 2000. These debts amount to USD 500 million and USD 280 million, respectively.

11. T-bills[19]

Domestic debt increased in 2000 by 38 percent to UAH 20.7 billion. In the second half of the year most of this debt was restructuved. The Government began efforts to revive the T-bill market that collapsed in 1998.

The volume of government securities traded on the primary market in 2000 declined from about UAH 3 billion to UAH 2 billion. The decrease in trading volume was caused by many factoris, including the slow pace of privatization, the unstable relationship with the IMF throughout the year, the precarious political situation at the end of the year, and by the decline in T-bills profitability. With respect to the last-mentioned factor, average weighted profitability in 2000 was 20.5 percent, compared to 27.5 percent in the previous year.

At the beginning of the year, the NBU's portfolio of government securities was UAH 9.6 billion. While the Ministry of Finance stopped servicing its debt to the NBU in October 1999, it did manage to restructure its debt in September 2000. Nonetheless, these government securities failed to attract large interest of the private sector. The volume of government securities traded on the Ukrainian Inter-Bank Currency Exchange (secondary market) slightly declined from UAH 2.9 billion to UAH 2.8 billion.

12. Investment and globalization

Fixed capital investment in 2000 totaled UAH 19.5 billion. The institutional breakdown was:

- private property – UAH 1.3 billion, or 6.7 percent of total
- collective property – UAH 8.0 billion, or 41.2 percent
- state property – UAH 10.0 billion, or 51.2 percent
- property of international entities – UAH 0.2 billion, or 0.8 percent

Thus, most investments were undertaken by the so-called collective sector, which includes worker-owned enterprises and diverse enterprises of mixed-ownership forms. The investment activities of private enterprises remained at a very low level. Also, most investment continued to be in the old economy – i.e., in heavy industry – and in the major industrial regions. Investment as a share of GDP fell from 13.5 percent in 1999 to 11.3 percent in 2000. Such a low level of investment was discouraging. Moreover, if asset depreciation is taken into account, net investment was actually negative. Weak market institutions, ineffective contract enforcement and an inadequate legal framework discouraged private firms from undertaking new fixed capital formation projects.

[19] Data is from Bulletin (January 2001).

Since 1992 Ukraine received only USD 3.9 billion in foreign direct investments (FDI). In the mean time, between 1992 and 2000, foreigners invested USD 41 billion in Poland, USD 20 billion in Russia, Hungary, and the Czech Republic, USD 5 billion in each of Romania, Croatia, Bulgaria, Romania, and Latvia. In 2000, USD 584 million was invested in Ukraine, which was 23.9 percent more than in 1999. Interestingly, more than half of all FDI was invested in industrial enterprises.

The largest investors in the Ukrainian economy since 1992 have been the United States, with USD 636 million; Cyprus, with USD 373 million; and the Netherlands, with USD 362 million.

The major investments in 2000 were in the form of:

- cash – 58 percent
- movable and immovable assets – 30 percent
- securities – 6 percent, and
- other – 6 percent

The last two decades have witnessed an unprecedented worldwide integration of national economies into one global market for goods, services, capital, technology, and information. Trade and financing relations have intensified. The transitional economy countries of Central and Eastern Europe, which adopted fast-track reforms, have achieved a significant degree of openness and are reaping the benefits of faster economic growth, and enjoying a growing share in international capital and access to new technology.

Ukraine needs more fundamental reforms to start taking tull advantage from the growth opportunities provided by the financial, economic, and technological globalization.

13. Privatization

According to Budget 2000, the State Property Fund was supposed to generate from privatization at least UAH 2.5 billion in budget revenues, which was UAH 0.4 billion more than it actually collected. In 2000, 5,300 enterprises were privatized, or 5 percent less than in the previous year.

The SPF had planned to sell in 2000 state shares in a large number of energy distribution companies and ferrous and non-ferrous metallurgy enterprises. However, the privatization of some enterprises was surrounded by scandal and court hearings, as in the case of Zaporozhsky Aluminum Plant (ZAP), and the privatization of energy distributing companies (*oblenergos*) was postponed until the beginning

of 2001. Nontransparent privatization procedures and the low-level investment appeal of Ukrainian enterprises were the main reasons for the failure to generate budget revenues as planned.

Conclusion

The year 2000 was a good year for Ukrainian economy. GDP began to grow, and after many years of decline, positive changes in output and trade finally took place: more Machinery and Consumer Goods; and less Power, Fuels, and Construction Materials. The pathologically high level of energy consumption in Ukrainian output declined, and labor productivity increased significantly. Moreover, the degree of economic openness increased impressively: in particular, the export-to-GDP ratio grew by 18 percent for total exports, and by 12 percent for visible exports. While inflation was relatively high at 25-30 percent, it remained under control and the prospects for lower inflation in the future are good. The pressure on prices from the growing money base was moderated by a rapidly growing demand for money; interest rates declined and the availability of bank credits expanded. Ukraine's economy underwent a process of rapid monetization that manifested itself, not only in more bank credits and less bad debts, but also in the declining use of barter, in decreased mutual settlements in the budget sphere, lower wage and pension arrears, and in shrinking dollarization. In addition, household incomes increased. There was further progress in privatization, the number of private firms grew significantly, and economic reforms continued.

There are several obvious questions concerning these accomplishments, including issues like: (1) the reliability of statistics, (2) the long-term direction of the reform process, (3) the very low level of current economic activities, and (4) the effects of the international market on the Ukrainian economy.

While it appears that the quality of Ukrainian **statistics** is still not particularly high, the official data nonetheless provides a reasonable approximation of the actual economic situation. Economic growth and the increases in real income are unquestionable, although their exact magnitudes require further refinement. In many cases, we lack detailed data and good documentation in support of the published statistics in order to properly evaluate particular processes. According to available information, several time series lack internal consistency, due to changes in methodology, and are therefore not fully compatible with one another. This observation seems to apply particularly to the case of industrial statistics (e.g., changes in the treatment of value added tax), barter statistics, etc.

It also appears that the **reforms** in the economy continue to progress, notwithstanding the various drawbacks. Difficult conditions at the beginning of this process, rather than the speed of reforms, are responsible for the current relatively low levels of living standards and market development.

While GDP and most other financial and economic indicators were originally at a very **low level**, this cannot be used to explain the rapid improvement of many of these indicators in 2000. For that matter, low starting levels do not automatically enable growth, as demonstrated by the further economic decline of Moldova, a country which had already been described as having the poorest economy in Europe. In our opinion, growth in Ukraine was enabled by continued reform efforts and the improvements in current policies. Important factors in stimulating investment and growth included, in particular, the cheaper hryvnia, the hardening of budget constraint for many actors in both the public and private sectors, a more transparent economy with less barter, progress in the monetization of agriculture, lower wage arrears, and improvements in contract enforcement. As long as the policies continue improving, growth should continue as well. Any attempt to return to the infamous policies which supported soft budget constraints, tax privileges and weak contract enforcement could undermine current policy achievements. A systematically revalued hryvnia could also threaten future economic growth.

Finally, the sustainability of Ukrainian growth could be affected by the changes in **international markets**. A combination of factors – including ruble depreciation, the high prices of gas and oil, and improvements in political stability – enabled the rapid growth of the Russian economy and have had a positive effect on Ukraine. However, Russia's economic growth and other improvements on external markets might turn out to be short-lived. This is yet another reason to continue the often unpleasant, but absolutely necessary, reforms of the Ukrainian economy and to further improve economic policies.

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Harvard/CASE Macroeconomic Quarterly Monitoring Tables[#]

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Tables presented in this chapter contain selected variables extracted from the Harvard/CASE Ukraine database. They cover the years 1995-2000, annual data; and 1999-2000, quarterly data. In the tables, light gray cells contain Harvard/CASE estimates, while dark gray cells contain the data that combine both old official figures and new (revised) official figures. Since in some cases not all relevant revised figures are available, slight inconsistencies within particular data groups may occur; for example, for foreign trade in 1999, the sum for four quarters was USD 17,058, which fails to be equal to the revised 1999 total foreign trade annual figure that amounted to USD 16,332.

Table Notes:

Anna Kolesnichenko, Dimitar Mishev, Khwaja Sultan, and Janusz Szyrmer substantially contributed to the conceptualisation, creation, and updating of these tables.

[1] cumulative
[2] to the corresponding period of previous year
[3] "+" is decrease in reserves and "-" is increase
[4] for the period
[5] end of period
[6] annualized weighted average, percent
[7] reserves = (money base) minus cash in circulation)
[8] for pensioners, registered in the social security authorities
[9] social protection and security

* as of November 2000
** 1000 KBV/100 RUR
*** as of the 10th day of the following period

Indicators	1995	1996	1997	1998	1999	2000	1999				2000			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
GDP														
Nominal GDP, UAH billion[1]	54.52	81.52	93.37	102.59	130.44	172.95	24.98	54.18	91.81	130.44	32.55	71.82	122.32	172.95
GDP growth. percent2	-12.2	-10.0	-3.0	-1.9	-0.2	5.8	-4.7	-3.0	-1.7	-0.2	5.5	5.0	5.2	5.8
Output, percent[1, 2]														
Industry	-12.0	-5.1	-0.3	-1.0	4.0	12.9	-2.4	0.2	2.3	4,0	10.3	11.0	11.8	12.9
Power		-6.9	-2.6	-0.2	6.6	-2.9*	3.3	5.0	6.5	6.6	3.2	1.7	-0.3	-2.9*
Construction	-35.2	-34.0	-11.9	1.4	-6.7	1.3*	-23.1	-19.4	-12.2	-6.7	8.9	5.2	3.7	1.3*
Agriculture	-3.6	-9.5	-1.9	-10.8	-6.9	-7.6	0.5	-1.5	-2,0	-6.9	-4.9	-4.6	1.3	7.6
Transport & Communications	-21.4	-17.7	-1.9	-3.6	-4.0	1.5*	-8.8	-6.5	-5.7	-4.0	4.9	1.9	1.6	1.5*
Trade		1.8	0.2	7.6	-3.0	5.3*	-9,0	-7.9	-7.6	-3.0	8.8	6.2	6.5	5.3*
Services		-10.6	-1.7	-3.6	-1.7	1.4*	-3.8	-3.1	-2.7	-1.7	3.4	1.9	1.6	1.4*
Foreign trade, USD million														
Exports (goods and services)	17 090	20 346	20 355	17 621	16 332	19 522	3 587	4 833	4 130	4 508	4 571	4 598	5 052	5 301
Former Soviet Union (FSU)	9 528	12 349	10 286	7 728	7 276	8 104	1 457	2 300	1 688	1 831	1 897	1 884	2 076	2 247
Rest of world	7 562	7 997	10 069	9 893	9 782	11 418	2 130	2 533	2 442	2 677	2 674	2 714	2 976	3 054
Imports (goods and services)	18 280	21 468	21 891	18 828	15 237	18 116	3 741	3 287	3 658	4 551	4 604	4 155	4 230	5 127
FSU	11 630	13 582	12 786	10 166	8 341	9 575	2 369	1 654	1 916	2 402	2 713	2 065	2 069	2 728
Rest of world	6 650	7 886	9 105	8 662	6 896	8 541	1 372	1 633	1 742	2 149	1 891	2 090	2 161	2 399
Balance	-1 190	-1 122	-1 536	-1 207	1 821	1 406	-154	1 546	472	-43	-33	443	822	174
FSU	-2 102	-1 233	-2 500	-2 438	-1 065	-1 471	-912	646	-228	-571	-816	-181	7	-481
Rest of world	912	111	964	1 231	2 886	2 877	758	900	700	528	783	624	815	655
Balance of payments, USD million														
Current account	**-1 152**	**-1 185**	**-1 335**	**-1 296**	**1 658**	**1 481**	**-329**	**1 569**	**414**	**4**	**-157**	**449**	**901**	**288**
Goods	-2 702	-4 296	-4 205	-2 584	244	779	-639	1 110	231	-458	-388	285	724	158
Nonfactor services	1 512	3 174	2 669	1 377	1 577	627	485	436	241	415	355	158	98	16
Investment income	-434	-572	-644	-871	-869	-942	-318	-153	-250	-148	-365	-219	-174	-184
Current transfers	472	509	845	782	706	1 017	143	176	192	195	241	225	253	298
Capital account	**1 566**	**946**	**2 120**	**2 106**	**-704**	**-1 331**	**774**	**-1 156**	**-288**	**-34**	**151**	**-491**	**-749**	**-242**
Direct investments	257	526	581	747	489	594	37	123	186	143	126	207	131	130
Portfolio investments	4	198	1 603	47	-86	-201	24	7	-138	21	-482	471	-96	-94

Indicators	1995	1996	1997	1998	1999	2000	1999				2000			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Other investments	1 299	1 090	319	-9	-814	-1 318	641	-1 012	28	-471	477	-1 308	-748	261
Medium- & long-term loans	3 706	1 140	1 025	130	5	-1 690	39	-61	262	-235	-1 447	-335	-160	252
Capital transfers	6	5	0	-3	-10	-8	-2	-2	-4	-2	-2	-2	-2	-2
Errors and omissions	74	239	-785	-810	-954	-150	-445	-413	-126	30	6	42	-152	-46
Overall balance	488	873	383	-1 324	283	398	-74	272	360	-275	-32	-141	34	537
Financing / reserves[3]	-488	-873	-383	1 324	-283	-398	74	-272	-360	275	32	141	-34	-537
Foreign currency & deposits	-446	-916	-507	1 432	-395	-214	108	-415	-216	128	49	99	11	-373
SDR	17	94	-5	-108	112	-184	-34	143	-144	147	-17	42	-45	-164
Securities	-59	-51	129	0	0	0	0	0	0	0	0	0	0	0
Consolidated budget														
Revenues, UAH million	**20516**	**30 141**	**27 148**	**28 916**	**32 876**	**49 115**	**6 161**	**7 727**	**8 767**	**9 685**	**8 956**	**11 351**	**12738**	**16 069**
VAT	4 517	6 293	7 602	7460	8 409	9441	1 636	1 898	2 316	2 280	1886	2199	2605	2747
EPT	4 833	5 450	5 689	5695	6 352	7698	1 066	1 499	1 575	2 231	1501	1621	2006	2599
PIT	1 600	2 639	3 293	3571	4 434	6378	840	1 045	1 167	1 382	1 176	1460	1695	2047
Excise	401	652	1 158	1289	1 788	2240	335	412	503	502	324	552	612	751
Privatization proceeds	74	199	128	471	822	2291	152	211	174	285	420	713	259	899
Other revenues	9091	14 908	9 278	10431	11 071	21 067	2 132	2 662	3 032	3 005	3649	4807	5560	6355
Expenditures, UAH million	**24 486**	**33 759**	**33 345**	**31 196**	**34 821**	**48 081**	**6 248**	**8 088**	**9 294**	**10 636**	**7 969**	**11668**	**11 892**	**16 552**
Debt servicing	2 447	2639	2 951	2 410	3 087	4569	1 207	365	838	680	533	1644	776	1616
Internal debt	183	558	930	1 663	1 251	1661	315	102	489	345	152	136	227	1147
External debt	2264	2082	2 022	748	1 836	2907	892	263	319	335	381	1508	549	470
Defence	1017	1252	1 419	1419	1 558	2295	192	366	482	489	371	498	685	743
State investments	865	1 069	535	836	1 085		190	370	256	269				
Housing and utilities	1675	1770	1 559	1404	1 165	1084	174	245	331	440	168	214	335	370
National economy, total	2608	2960	3 913	4 099	4 827	6 602	881	1 176	1 708	1 062	895	1 509	1 667	2 531
Agriculture	343	300	48	608	539	886	65	102	138	226	94	187	215	385
Coal (fuel and energy)	0	133	1 083	1434	1 660	1913	343	497	343	649	380	459	473	603
State reserves	0		1 386	123	398	912	33	104	147	114	3	6	13	392
Total social-cultural	6 110	7 717	9 633	12 826	13 117	18947	2 353	473	3 486	6 805	3 417	4560	5039	5931
Soc. protection[9]	3 367	4 065	5 504	4 227	4 147	5985	691	3 263	1 211	1 557	1 112	1486	1807	1563
Education and health	5561	7086	8 871	8196	8 423	11974	1 544	1 032	2 173	3 674	2 145	2813	2982	3942

Indicators	1995	1996	1997	1998	1999	2000	1999				2000			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Other social and cultural	549	631	762	663	1 985	1097	118	191	102	1 574	160	261	250	427
Other	9764	16351	12 424	7 634	6 638	13776	1 251	2 303	2 193	891	2 585	3243	3852	4558
Consolidated budget deficit, UAH million														
Budget balance (IMF method)[1]	2429	2 607	5 189	2 766	3 101	1 256	195	953	1 701	3 101	-567	463	-125	1 256
Budget balance (MinFin)[1]	3970	-3964	-6 201	-2 280	-1945	1 035	-88	-448	-975	-1 945	987	670	1 517	1 035
Deficit / GDP ratio (MinFin)[1]	7.3	-4.9	-6.6	-2.2	-1.5	0.6	-0.4	-0.8	-1.1	-1.5	3.0	0.9	1.2	0.6
Domestic financing[4]			4 956	1 343	2014	1502	-43	776	63	1219	-553	879	-571	1747
Net external financing[4]	779		233	852	-81	-584	221	-502	515	-315	-400	-434	-129	379
Inflows			1 502	3245	1 815	381	589	746	465	464	0	0		
Redemption (principal)			1 269	2393	1897	965	300	890	373	418	368	834		
Prices														
CPI (Q1-1995 = 100)	177	247	272	326	389	489	338	354	359	389	428	461	473	489
CPI, average annual change, %	377.0	80.3	15.9	10.6	22.7	28.2	21.2	25.4	26.0	18.7	25.1	27.4	31.1	28.9
CPI, point-to-point change, %[5]	181.7	39.7	10.1	20,0	19.2	25.8	3.5	4.9	1.4	8.3	10.2	7.7	2.5	3.4
Food	150.1	17.4	14.1	22.1	26.2	28.4	5.9	4.9	-0.3	13.9	11.5	7.1	3.0	4.4
Non-food	120.0	18.8	2.9	24.1	10.6	8.9	0.7	1.7	4.5	3.3	3.3	1.7	2.0	1.6
Services	484.4	112.7	7.9	13.0	11.9	31.2	1.1	7,0	2.3	1.1	13.1	12.4	1.6	1.5
WPI, point-to-point change, %[5]	172.1	17.3	5.0	35.3	15.7	20.8	2.3	3,0	5.7	3.9	7.9	3.5	3.3	4.5
T-bills, Interest Rates														
Yield, weighted average, %[4]	86	71	33	55	28	20	32	30	24	22		20	21	23
OVDP sales, UAH million[5]														
Primary market	304	3063	8322	8164	3842	1892	1 028	1 154	966	694		1 685	27	180
Secondary market		1913	6549	5017	2895	2798	496	343	1 207	848	252	1 926	458	162
NBU refin. rate, %[5]	110.0	40.0	35.0	60.0	45.0	27.0	60.0	45.0	45.0	45.0	32.0	29.0	27.0	27.0
Interbank O/N rate, %			22.1	40.4	45.0	8.7	45.0	26.0	45.8	63.2	11.9	10.9	32.9	8.7
Comm. banks credit rate, %[6]	107.1	77.0	49.1	54.5	53.4	40.3	61.7	54.5	50.9	52.4	47.9	40.4	38.0	38.1
Comm. banks deposit rate, %[6]	61.2	34.3	18.2	22.3	20.7	13.5	24.1	20.5	17.9	20.8	16.9	11.9	13.6	12.7
Inter-enterprise arrears, UAH billion[1]														
Accounts receivable	22.3	48.0	74.1	103.0	163.5	178.2	127.4	150.8	157.9	163.5	177.2	185.6	186.2	178.2
Accounts payable	30.5	73.2	102.5	137.6	196.4	222.4	163.4	183.4	192.1	196.4	219.1	235.7	232.6	222.4

Indicators	1995	1996	1997	1998	1999	2000	1999				2000			
							Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Public debt[1, 5]														
Internal debt, USD million[1, 5]		1929	5367	3315	2 871	3 824	5 790	6 843	3 906	2 871	2762	4259	3891	3 824
External debt, USD million[1, 5]	8000	8839	9553	11483	12475	10356	11 350	12 392	12 890	12 475	10978	10569	10073	10356
Debt payments (P+I)	1420	1112	1393	2434	893	1220	570	213	110	470	149	332	373	366
Official exchange rate[5]														
UAH/100 USD	179.40	188.90	189.90	342.70	521.63	543.45	393.56	394.89	446.97	521.63	542.76	543.78	543.97	543.45
UAH/100 DM	125.15	121.49	105.97	204.84	267.93	258.55	215.53	209.25	241.40	267.93	265.16	264.24	243.78	258.55
UAH/10 RUR	3.87**	3.40	3.19	1.66	1.93	1.93	1.63	1.63	1.78	1.93	1.91	1.94	1.96	1.93
Monetary indicators. UAH million5														
Money supply, M3	6 930	9 364	12 541	15 705	22 070	32 084	15 923	18 579	20 468	22 070	24 211	27 098	28 975	32 084
Currency in circulation, M0	2 623	4 041	6 132	7 158	9 583	12 799	6716	7 915	9 008	9 583	9 465	10 783	11 541	12 799
Net domestic assets	4 336	5589	7622	15 294	21 495	20 506	16679	17 659	19 224	21 495	21 581	21887.3	20717	20 506
Net claims on Government	4295	5995	7096	14620	19121	19 939	15 610	16057	17250	19121	19601	20500	19932	19 939
Net foreign assets	-779	-614	-211	-6655	-9286	-2945	-7 930	-7 038	-7 756	-9286	-8 571	-7465	-5569	-2945
Monetary base	3 540	4 882	7 058	8 625	11 988	16 777	8 562	10 334	11 069	11 988	12 580	14 025	14 888	16 777
Reserves of comm. banks[7]	917	841	926	1 467	2 405	3 978	1846	2 419	2 061	2 405	3 115	3 242	3 347	3 978
Foreign exchange reserves, stock, USD million[5]														
Foreign Reserves (excl. gold)	1051	1 960	2 341	761	1 046	1 353	673	941	1332	1046	941	812	825	1 353
SDR	144	67	71	182	66	249	209	64	214	66	82	39	71	249
Foreign currency	906	1893	2 270	579	981	1 104	464	877	1118	981	859	773	754	1 104
Gold (national estimation)	18	12	18	32	47	124	33	33	45	47	119	127	124	124
Privatization														
Number of enterprises privatized[5]	28 152	48 118	57 009	62 349	67 998	73 349	63 429	64 509	66 399	67 998	69 051	70 278	71 654	73 349
Wages														
Average wage, UAH/month	73	126	143	154	177	231	156	172	184	199	194	216	245	269
Wage arrears. UAH million1. 5	575	3 739	4 908	6 518	6 462	4928***	6 814	6 886	6 830	6 462	6 517	6 325	5965	4928***
of which in budget sphere	192	994	717	960	591	261***	967	899	735	591	628	545	437	261***
Average pension,[8] UAH/month[1, 5]	39	52	52.2	61	69	84	61	62	69	69	71	72	73	84
Pension arrears, UAH[1, 5]	72	1 124	1 280	1 974	1 263	0	2 282	1 974	1 611	1 263	1 310	858	0	0

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Other Harvard/CASE Monographs:

These monographs contain collections of articles written by the Harvard/CASE Ukraine Project team and its associates. The books are available in two languages: English and Ukrainian. The activities of the Project are funded by the United States Agency for International Development (USAID).

"Ukraine Through Transition: Challenges and Strategies," edited by Janusz M. Szyrmer and Khwaja M. Sultan, Kyiv: 2000.

> This book contains a selection of papers presented at the Ukrainian-Polish-American Workshop on *Fiscal Policy in a Transition Economy*, held in Pultusk and Warsaw, Poland. The workshop was sponsored by USAID, Eurasia Foundation, USIS, Renaissance Foundation, Know How Fund, Freedom House, and KPMG (Barents Group). The book consists of three parts: (1) general macroeconomic policy, institutional development, and "virtual economy"; (2) financial reforms, including tax reform, taxation in agriculture, local self-governance and financial decentralization; and (3) financial crises, demonetization, and state debt and budget deficit.

"The Barter Economy: Non-Monetary Transactions in Ukraine's Budget Sector," edited by Janusz M. Szyrmer, Kyiv: 2000.

> This book addresses the so-called non-monetary settlements of the budget, which belongs to a broader problem of "demonetization," closely interrelated with such phenomena as price distortions, non-transparency of budget expenditures, and low budget revenues. This book is an attempt to systematize the knowledge on the non-monetary settlements and to propose the strategies toward a solution of this problem.

"Reforms for Ukraine: Ideas and Actions," edited by Janusz M. Szyrmer and David Snelbecker, Kyiv: 2000.

> Diverse concepts and ideas concerning post-Soviet transition are presented. The analysis and evaluation of current experience with transition are used to formulate policy recommendations for Ukraine and other countries of the region. The focus of the book is on specific reform measures as well as interactions among these measures and their direct/indirect and short-term/long-term effects on the economy. The authors emphasize the importance of such disciplines as general social science theory, political economy, and sociology, as well as such growth factors as information, institutions, both formal and informal, and policies.

More information and ordering instructions can be found at:
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